American Aviation

SERVING THE INDUSTRY SINCE 1937

40 Flying Years for E. V. "Pop" Cleveland

AUGUST 6
1951

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THE INDUSTRY'S FIRST NEWS MAGAZINE

NEWS SECTION

Volume 15 Number 10

August 6, 1951

a LOOK at the WEEK

Air Force will seek 138 combat wings when it asks for build-up from 95. However, combat wings no longer include troop carrier and strategic transport units, and an additional 20-25 carrier and transport units will be requested. Coupled with shift from peacetime three squadrons per wing to a combat four, this will mean doubling the current 95 wings, which include 15 carrier and transport units.

•

Officials in charge of procurement of military materiel say that 48 cents out of every defense dollar in next 12 months will be spent for aircraft.

•

Major manpower policy statement will be issued soon by Defense Mobilizer Wilson. It will call for surveys of available workers before defense contracts are placed, and for more cooperation between Labor and Defense Depts. Program will probably also approve keeping the basic 40-hr. work week.

•

Although there's a temporary abundance of skilled workers in Detroit area, there's little chance of them leaving for aircraft producing areas where they're in great demand. Unemployment was caused by materials shortages and lag in converting to war production. However, most of them are convinced that Detroit won't be neglected when more war orders are passed out.

•

One result of Korean armistice, if it comes, will probably be reduction in inflated price of DC-4 transports. DC-3's may also drop as DC-4's are released from Pacific airlift.

•

One result of House reduction in funds for CAA's airport program will be that cuts will be on a percentage basis. Thus, where CAA is permitted to take part in an airport project up to 50%, it will reduce its grant offer to 40% or less.

•

In the fourth quarter of 1951, Canadian defense manufacturers for the first time are allotted U. S. controlled materials.

•

Although Alcoa strike in Cleveland ended last week, effect will be felt for weeks. There's no way of estimating how many aircraft engines were lost.

Boyer Takes Over APB

Harold R. Boyer has been sworn in by Defense Mobilizer Charles E. Wilson as DPA's Deputy Administrator for Aircraft Production and Chairman of the DPA Aircraft Production Board. His group, now firmly established, has responsibility for over-all coordination of the aircraft production program.

Powers: Formulates and recommends policies and procedures for insuring required production, including scheduling of aircraft components, materials, expansion of facilities, production equipment, conservation and related matters. Also determines, through established agencies, total requirements for aircraft, including military, commercial and civilian, and recommends the allocation of the available supply of materials and equipment for the aircraft production program.

Membership: NPA Administrator Manly Fleischmann; Undersecretary of Commerce for Transportation Delos W. Rentzel; Munitions Board Chairman John D. Small; Rear Adm. T. S. Combs, Chief of Navy's Bureau of Aeronautics; Maj. Gen. O. R. Cook, USAF's Deputy Chief of Staff, Materiel; Maj. Gen. John K. Christmas, Chief of the Army's Procurement Division Office, Logistics; and Boyer as Chairman. Other members may be added later.

Status: Directly under DPA Administrator Fleischmann, just two steps removed from Wilson's Office of Defense Mobilization, the top agency on defense in the government. Boyer is also a friend of Wilson's, having worked with him during World War II on the old Aircraft War Production Board.

Future Plans: Boyer has scheduled trips to almost all prime aircraft manufacturing plants in the next few months to find out for himself what the problems are. Biggest headaches now facing expanded aircraft production are shortages of special machine tools and a lack of rare metals needed in jet engine alloys. Boyer also plans to try to aid aircraft plants in obtaining the skilled manpower and engineering talent they need.

Revised Controls Bill Passes

New economic controls bill passed by Congress has several changes and modifications of interest to the aircraft industry. Included are:

Creation of a separate panel to handle wage cases of employes under the Railway Labor Act. This means that airline employes will no longer come under the Wage Stabilization Board's Appeals and Review Committee.

Establishment of a Small Defense Plants Administration designed to help small businessmen get more war contracts.

Continuance of the government's power to make loans and its priority and allocations authority.

Continuance of the government's authority to install equipment in Federal and private defense plants. Administration's request for power to build new war plants was turned down.

Relaxation of restriction on financing of private homes in defense areas. Some aircraft producing areas have had trouble getting skilled help because of housing shortages.

NAL Daylight Coach Approved

CAB relaxed its ban on daylight coach services and approved National Airlines' proposed New York-Miami DC-6 operation for one year. Except for transcontinental

operations, all scheduled coach flights have been restricted to late-night departures.

National's proposal, carried by a 4-1 CAB vote, was found by majority to have prospects of a profitable and load-increasing operation. But dissenting Member Chan Gurney termed majority's finding "an ill-advised gamble with the economic progress of the industry." Eastern Air Lines expects to counter with a New York-Miami Constellation daylight coach operation and other similar proposals may be expected.

Alcoa Strike Ends

Strike of 2,100 United Auto Workers-CIO employes of the Aluminum Company of America plant at Cleveland has ended with a compromise over the effective date of a three cent per hour pay boost. Union had wanted the increase made retroactive to Dec. 18 while Alcoa insisted it become effective when a contract was signed. The negotiators agreed on payments retroactive to Jan. 22.

The walkout, which started June 11, had widespread effects on aircraft production. The ALCOA plant produces aluminum forgings and some castings.

MANUFACTURERS

Machine Tool Aid: General Services Administration, in another attempt to boost machine tool production, will advance tool builders up to 30% of government orders at 4% if they can't get private financing "on reasonable terms." U. S. now has 44 orders for $152,000,000 in machine tools.

T-36 Orders: Canadair, Ltd. will get the bulk of USAF's production order for the Beech T-36A trainer. Reliable Canadian sources indicate Canadair will build 300 at about $100,000,000. Beech has received an order for only 60 but this might be increased later.

CMP Allotments: DPA's fourth quarter allotments under CMP give NPA's Aircraft Division 15,639 tons of steel, 1,148,000 pounds of copper and 7,950,000 pounds of aluminum. CAA gets 6,190 tons of steel, 741,000 pounds of copper and 20,000 pounds of aluminum. In all, Defense Department receives 1,946,000 tons of steel, 205,800,000 pounds of copper and 168,000,000 pounds of aluminum but how much of this will be used for military planes was not revealed.

Lockheed's Marietta Plant: USAF has given Lockheed Aircraft Corp. a letter of intent calling for a definite production schedule of Boeing B-47's at Marietta, Ga. It also authorized purchase of materials necessary to carry on later production at a higher rate. The 4,000 workers now modernizing Boeing B-29's there will be increased when B-47 production starts.

C-W Backlog: Curtiss-Wright Corp. has a backlog of more than a billion dollars, the second in the aircraft industry to top that figure (Boeing is the other). At the end of 1951's first quarter, C-W's orders totalled $365,750,000.

Globe Drone: Globe Corp.'s Aircraft Division has received a Navy contract to build KD2G-2 drone target aircraft. The KD2G-2 is pulse jet powered and retrievable by means of a parachute assembly.

Tonawanda Expansion: Chevrolet Motor Division, General Motors Corp. will spend about $20,800,000 at its Tonawanda, N. Y. plant to increase production of Wright R-3350 engines. Plans call for a 360,000 square foot engine plant, a 230,000 square foot forge plant and a 370,000 square foot foundry.

PLANES & EQUIPMENT

No R-2800 Deliveries: Pratt & Whitney Aircraft will not accept deliveries for commercial R-2800 engines until it can foresee delivery within 18 months. Commercial production has been absorbed through June, 1953 and late 1953 production will be allocated. The R-2800 is used in the Douglas DC-6, 6A and 6B, the Martin 202 and 404 and the Convair 240 and 340.

Larger Packet: USAF has ordered one model of a larger C-119, designated the C-119H. It will have a 40% greater wing area and a wing span of 148 feet, compared with 109 feet on present versions. The H model will be powered by two Wright R-3350's and will be capable of lifting a 25,000-pound payload a distance of 1,500 miles. Gross weight will be upped from present 74,000 to 85,000 pounds. Other improvements include better stability and control, improved single engine performance, a rough field landing gear, a new cockpit bailout hatch, greater center of gravity range for cargo, increased horizontal tail clearance for paratrooper and cargo drops, and individual heaters for tail, wings and fuselage to eliminate ducting.

First 4-0-4 Flight: First of the Martin 4-0-4 twin-engine transports to be built has completed its first flight. Powered by two Pratt & Whitney R-2800 engines, the plane can later be converted to take turboprop engines.

New Sabre: North American Aviation has a prototype contract for an F-86H and will probably receive a production contract later. The H differs from other Sabres mainly in the use of the General Electric J-47-GE-29, a late model of GE's all weather -21 jet engine. Fuselage will be lengthened about six inches in the craft.

Commander Production: Aero Design & Engineering Co. now has 35 orders for its Commander on hand and hopes to reach a production goal of 40 by the end of the year. Two planes are now in final assembly and work is under way on 10 more.

Swept-Wing B-36: First flight of the eight-jet, swept-wing version of Convair's YB-36G, which has now been renamed the YB-60, is expected late this year. Pratt & Whitney J-57 engines will probably be the power plants.

Second Canberra: A second English Electric Canberra will be flown to the Martin plant from England late in August to help speed production of the American version, the B-57A. U. S. version will be a night intruder powered by Wright J-65 engines, will have a tail-housed parachute brake for short-field landings, and will be equipped to take JP-3 fuel. Bomb bay will be redesigned to carry a larger number of smaller bombs.

Atom Bomb B-47: A Boeing B-47 was fitted with special equipment before taking part in the recent Eniwetok atom bomb tests. Pickups for measuring pressure changes were installed in the wing and tail and stress measuring devices were placed in the fuselage, engine supports, wing and tail. Recording equipment made a complete record of pressure and stress changes.

C-47 Overhaul: Two Florida overhaul firms have received contracts to maintain and overhaul USAF C-47's. They are Aerodex, Inc., Miami, which will take care of 70 Skytrains and American Automotive Corp., Miami Springs, which will recondition five and handle cycle maintenance of nine others.

Trans-Polar Flight: An RAF Aries bomber, long-range version of the Lincoln, has flown 3,553 miles from Iceland to Alaska, but has had engine trouble and the return trip has been delayed.

(*Continued Facing Page* 62)

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Cover Photo

ONE OF AVIATION'S most colorful and widely known figures, E. W. "Pop" Cleveland, 62, is being honored by friends at a big dinner at the Carter Hotel, Cleveland, August 10. Seems that Pop, known affectionately as "the old goat" because of his trim goatee, made his first solo flight 40 years ago. As v.p. of Cleveland Pneumatic Tool Co., he continues to fly his own plane around the country. Glenn H. Curtiss took him on his first flight in 1911 and he soloed at the old Curtiss school at Hammondsport, N. Y. He instructed in Canada and the U. S. in World War I, has been connected with almost everything in aviation ever since. Cover photo was taken several years ago in office of Maj. Gen. Fritz Borum at Tinker Air Force Base, Oklahoma, Gen. Borum feeling that his rare African goat head was an appropriate photographic companion piece.

other publications

American Aviation Daily (including International Aviation): Published daily except Saturdays, Sundays and holidays. Subscriptions: $16 one month; $180 one year Daniel S. Wentz II, managing editor.

American Aviation Directory: Published twice a year, spring and fall. Single copy, $5.00. Marion E. Grambow, managing editor.

Official Airline Guide: Monthly publication of airline schedules and fares. Subscriptions: U. S. A. and countries belonging to the Pan American Postal Union, including Spain and the Philippines, $9.00 one year, Canada, $9.50. All other countries, $11.00. Published from editorial offices at 139 North Clark St., Chicago 2, Ill. State 2-2154. C. N. Johnson, managing editor.

American Aviation Traffic News (incorporating Air Tariff Reports): Published daily except Saturdays, Sundays and holidays. Subscriptions: $150 a year. Preble Staver, managing editor.

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American Aviation is published every Monday by American Aviation Publications, Inc., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for United States, Canada, Mexico, Central and South American countries—$5.00 for 1 year; $8.00 for 2 years; $10.00 for 3 years. All other countries—$7.00 for 1 year; $12.00 for 2 years. Entered as Second-Class matter in Washington, D. C., and Harrisburg, Pa.

Publishing Corporation: American Aviation Publications, Inc., Wayne W. Parrish, president; Albert H. Stackpole, Eric Bramley, vice presidents; E. J. Stackpole, Jr., secretary-treasurer; John H. Poole, assistant secretary-treasurer.

West Coast Office: Park Central Building, 412 West Sixth St., Los Angeles 14, Calif. Trinity 7997. Fred S. Hunter, manager.

Chicago Office: 139 North Clark St., Chicago 2, Ill. State 2-2154. Bruce L. McGregor, regional advertising manager.

Foreign Advertising Representative: United Kingdom—Pearl, Cooper Ltd., 2-3 Norfolk St., Strand, London, W. C. 2. Tel. Temple Bar 8111/2.

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Editorial

Breakdown Coming

CALLING to active duty of reservists who are CAA traffic controllers threatens a serious breakdown in the nation's billion dollar air traffic control system this coming winter.

The present outlook is for a return to something like the 1947 level of delays at major terminals. Both airline and military operations will suffer. Complaints from the public will be long and loud. Only by the most urgent action can anything be done at this late date to prevent a costly deterioration.

by W. W. P.

For want of a few hundred experienced personnel, a billion-dollar technical system will be slowed down and airline delays will cost high in the millions of dollars. Safety is not to be overlooked as a vital factor as well.

Of the 1,551 authorized air route controllers—the men who govern the airspace between major terminals—some 150 have been recalled to active duty to date by the military services. Of the 1,846 airport controllers who direct traffic within the immediate vicinity of airports, 109 have been recalled to date.

But this is only part of the story. A high percentage of controllers are reservists and hundreds more are due to be recalled to service within the next six months.

It takes from 12 to 24 months to train a good traffic controller. The positions are Civil Service, which means that veterans have preference, and a great many veterans have kept their reserve status. So even the majority of replacements are subject to recall.

You can't blame the controllers. CAA salaries being what they are, the men stand to gain financially by putting the uniform on again. With very few exceptions every controller who has been recalled could have been deferred if he had wished it that way. It was his choice to go back in uniform—and this is still a free country.

What happened last March in the Fort Worth area when 30% of the traffic controllers were suddenly recalled to duty has been fairly well publicized. Military and airline operations were seriously curtailed. The Fort Worth incident is just a prelude to what will happen all over the country starting early in the fall.

In Region I, for example, the vital area focusing on New York City, there are 47 vacancies for controller positions today out of an authorized total of 319. *And of the remaining 272 on the job, 139 are in the reserves. Over half of the 272 men now working have been on the job less than one year.*

If nothing else, the present crisis points up the singular fact that the vast electronic air traffic control network of the country is dependent upon the human link—the experience and judgment of a few thousand men.

The Air Force is reasonably sympathetic to the problem and has "loaned" back to CAA a few of the controllers they had called up. But the vast majority of skilled controllers were assigned to military jobs far apart from their experience. CAA Administrator Charles Horne has been working hard on the problem but not enough action is being taken to stem the tide. One reason why it's difficult is that we haven't yet got to that point in the mobilization effort when men are ordered to do certain jobs.

In a large sense, this winter may see the most serious air traffic crisis in history. Both airline and military operations have been stepped up markedly. During the most recent month for which records are available there were *one million* traffic control postings, 60% of which were airline, 30% military and 10% itinerant. Under the best manpower conditions, the control system could handle next winter's traffic in stride. But the human link, the link of training and experience, is breaking down.

It looks to be a mighty tough winter ahead.

Short Haul Economics

IF AIR freight moves at 20c per ton mile, why should the Post Office Department pay 60c and up per ton mile to the airlines for carrying the mail?

This question has long been involved in one of the many popular misconceptions about the economics of air transportation and of mail requirements, but it was answered in convincing fashion the other day by C. E. Woolman, president of Delta Air Lines, when he testified before the Senate committee studying air mail pay.

If Delta had received current air freight rates for all of the mail it carried in May, 1951, it would have received more compensation than it did from its regular mail pay.

A study of one flight for the month of May revealed that the average mail load was 104 pounds. There were 10,636 pounds of mail carried on this flight in 1,215 pouches, each pouch averaging 8.7 pounds and moving an average distance of 149 miles. Under its present mail pay, Delta got $603 or slightly less than 50c for each pound.

But if this mail had been carried as air freight, with the P. O. Department being given all the benefits of consolidation available to single shippers, Delta's total revenue would have been $1,729 or $2.18 per ton mile.

The 20c per ton mile rate so frequently quoted is for large shipments moving long distances. It costs a lot more money to operate locally and shippers pay much higher rates accordingly for small shipments moving short distances. Much of the mail movement is in small pouches traveling between intermediate stops.

As Mr. Woolman pointed out, a flat ton mile rate for carrying mail without regard to the type of service performed is bound to be inequitable. There are inherent differences between long and short haul transportation that must be recognized by any rate-making agency.

Letters

Letters should be addressed to The Editor, American Aviation Magazine, 1025 Vermont Ave., N.W., Washington 5, D. C. Anonymous letters will not be printed, but names will be withheld upon request.

From Canadair

To The Editor:

I want to express my appreciation of the copy of the July 9th issue of AMERICAN AVIATION sent to me under cover of your card, and the generous mention therein of Canadair Limited.

You have done a service to the financial community and to our stockholders in setting forth in so clear and interesting a fashion your views respecting Canadair Limited, its present status and its future prospects. The statesmanlike stand that you take in the editorial "One Way Street" will be greatly appreciated by all who are sincerely interested in the effective integration of the defense efforts of Canada and the United States.

JOHN JAY HOPKINS, President
Electric Boat Company and Canadair Limited

Unbiased

To the Editor:

Your editorial "One Way Street" in the July 9th issue is the most unbiased and clear-cut dissertation on a delicate subject which it has been my good fortune to read.

GORDON R. McGREGOR, President
Trans-Canada Air Lines
Montreal, Canada

No Sin

To The Editor:

I was very much interested in the article on serving fish on the airlines in your last issue. In 1938 when I was with American Airlines, I got a special dispensation from Cardinal Mundeleine which stated that any Catholic in the air on Friday, providing nothing else was served, could eat meat. He then gave his approval to have this letter photostated and carried aboard every airplane so that it could be shown to every Catholic who said it was a sin to eat meat on Friday.

After reading the story in your magazine, maybe the Catholics should again get a dispensation or dig up the old one.

EDWARD G. BERN
Sales Manager
Pan American-Grace Airways, Inc.

Comparison

To The Editor:

One reason Ralph Damon is a top flight airline executive is that he realizes every industry dealing with aviation is a customer or a potential customer of TWA, and he replies to inquiry letters promptly and at length, a policy we have found current in no other airline. (In my part of the country, we believe it polite anyway to reply to a letter).

I am interested in five industries, aside from oil, which deal with aviation, the staffs of which use airline travel extensively, and believing that Ralph Damon runs TWA in the same prompt effective manner as he does his own office, we naturally fly TWA wherever possible.

Believe it or not, inquiring of United Air Lines, Chicago, by letter, as to their flight schedules New York to Seattle, last month, no reply was received at all, and we therefore used other airlines including TWA.

HARRY PENNINGTON
San Antonio, Texas

Super DC-3

To The Editor:

Just a note to thank you for the swell article on our Super DC-3 by Bill Perreault in the May 28 issue.

You presented the facts fairly, and I think that the article will answer many of the industry questions in regard to these excellent planes.

MORTON S. BEYER
Capital Airlines, Inc.

To the Editor:

In your issue of May 28th, 1951, on page 24 and 25 you have an article on the Super DC-3. It is a very interesting article and shows the qualities of the Super DC-3 well.

I am surprised to read about the mechanical delays which have been quoted as averaging about 23 to 24 delays per 1,000 hours' flying operations for the DC-3 and about 40 for the Super DC-3. We consider this rate to be extremely high. Similarly, the unscheduled removals of parts of about 110 per 1,000 hours is also considered very high. In our opinion mechanical delays of about 4 to 5 per 1,000 hours' operations would be just normal.

I hope I am correct in taking this delay rate as an abnormal one and not representing an average figure of various American operators of this equipment.

I shall be obliged if you can very kindly give the average delay rate and the best rate that has been for Dakota and Convair 240 aircraft.

Your article "Airlines Gain in Extending Overhaul Times" is extremely helpful. It is not possible for foreign airlines who are not members of the Air Transport Association to get the Maintenance Standards Plan? It is possible for you to publish this "Maintenance Standards Plan" or an extract of it?

M. M. SALIM
Chief Engineer
Orient Airways Ltd.

(Editor's Note: Rigid accounting and the large number of take-offs and landings per 1,000 hours are a major factor in the mechanical delay problem here. Capital counts every delay, even if the time is only one or two minutes. Moreover, the average Super DC-3 hop is only 35 minutes. Thus the mechanical delay rate actually represents only about 2.5% of all departures. The unscheduled removal rate is high and reflects, as did the story, the chronic problems with certain components. These are being ironed out.

We do not have readily available figures on delay rates for the DC-3 and CV-240 but will check and notify reader Salim. Finally, the maintenance standards plan is now being modified to incorporate the findings of the three airlines conducting the initial trials. When a final program is adopted we plan to publish its details.)

Picking Safe Pilots

To The Editor:

I was delighted with the first paragraph of "Extra Section" in the July 9th issue of AMERICAN AVIATION. Picking pilots who are going to live a long time is my business and I would very much appreciate knowing the name of this airline and the name of this psychologist, as I would like to get in touch with them and see if I can learn anything.

My own theories on picking pilots, presented on the attached sheet, are working very well, but I would like to see someone put them on a scientific basis and perhaps by swapping ideas with this psychologist we could both benefit.

I will appreciate this information very much.

E. L. STEPHENSON
Middle West Manager
Associated Aviation Underwriters

(Editor's Note: We appreciate reader Stephenson's interest and are forwarding additional information on Captain Ben Kaufman, the psychologist mentioned in this item. We also plan on reproducing the referenced "theories on picking pilots" which we are sure will interest many of our readers.)

BOOKS

COMMERCIAL AIR TRANSPORTATION, *(3rd edition) by Dr. John H. Frederick, 472 pp. Illust. Published by Richard D. Irwin, Inc., Chicago. Price $6.65.*

The jacket of this textbook says this third edition has been "entirely rewritten" but there are a great many indications that much of the type of the first and second editions has been utilized. There are quite a few references that are obsolete, such as to Transcontinental & Western Air, Inc., long since changed to Trans World Airlines, and to Pennsylvania-Central Airlines which has long since become Capital Airlines.

Dr. Frederick is professor of transportation and foreign trade of the College of Business and Public Administration at the University of Maryland and has done quite a bit of writing on aviation subjects. He has been a familiar figure at many aviation gatherings.

(Continued on page 54)

Maybe you chaps weren't aware of it, but you came within an ace of losing those helpful airway beacons.

It's a fact, a discontinuance and disposal program was already under way by the CAA when the squawks began.

Even though the beacons aren't essential to the airlines, the CAA has now learned of their great importance to pilots of personal and small industrial planes who fly *without* all the latest navigational equipment.

We say, "Hot Diggity!" That friendly old flasher has kept us out of the pea patch plenty of times! Bravo—and long live the beacon!

SO WE'RE GOING TO PLUG OIL!

This time it's Gulf Aircraft Engine Oil—Series R—that wonderful, nondetergent, straight mineral lubricating oil for *radial* aircraft engines of all types!

This top-quality oil has the ability to maintain body at high operating temperatures! And—its high resistance to oxidation retards formation of sludge and carbon.

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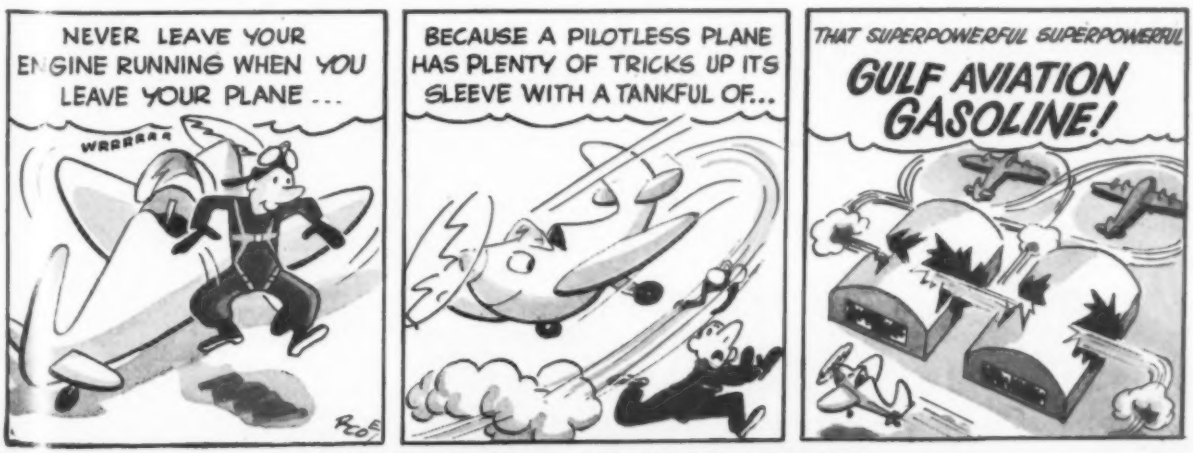
Next time, be sure it's Gulf Aircraft Engine Oil—Series R!

P. S. Yes indeedy, for horizontally opposed engines there's always that old favorite — Gulfpride Aviation Oil — Series D!

GULF
AVIATION PRODUCTS


NEVER LEAVE YOUR ENGINE RUNNING WHEN YOU LEAVE YOUR PLANE...
WRRRRR
BECAUSE A PILOTLESS PLANE HAS PLENTY OF TRICKS UP ITS SLEEVE WITH A TANKFUL OF...
THAT SUPERPOWERFUL SUPERPOWERFUL
GULF AVIATION GASOLINE!

Gulf Oil Corporation . . . Gulf Refining Company

FOR DEFENSE

Bell Aircraft Corporation, long recognized for its scientific and productive contributions to the nation's security, is applying all its energies to one of the most diversified and long range programs in the aircraft industry . . . a program which serves all branches of the Armed Forces.

With an imposing list of "aviation firsts" in its history and challenged by the increasing complexities of today's aeronautics, Bell continues in the forefront of many activities. This pioneering company is actively engaged in the development and manufacture of five types of helicopters . . . guided missiles . . . radio controlled bombs . . . specialized research aircraft such as the X-1, the X-2 and the X-5 . . . electronic equipment . . . rocket motors . . . convertiplanes . . . and components for the B-36 and B-47 bombers.

Bell invites the applications of qualified aircraft engineers.

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BUFFALO 5, NEW YORK

When & Where

Aug. 11-19—Michigan Aviation Week, Aero Club of Michigan.

Aug. 12—Renaming Reading Municipal Airport, Reading, Pa.

Aug. 13-15—Society of Automotive Engineers West Coast Meeting, Olympic Hotel, Seattle, Wash.

Aug. 15-19—99's 5th ann. All Woman Transcont. Air Race, Santa Ana, Calif., to Detroit.

Aug. 17—NAA annual meeting, Detroit.

Aug. 18-19—National Air Races, Detroit, Mich.

Aug. 22-26—99's Int'l convention, Macinac Island, Mich.

Aug. 24-26—Air Force Assn. annual convention, Los Angeles.

Aug. 25—Air Transport Command reunion, Ambassador Hotel, Los Angeles.

Aug. 25-29—Nat'l Flying Farmers Assn. 5th annual conv., Ft. Worth, Tex.

Sept. 25-28—CAA Airport Advisory Committee, Special Airport Design Meeting, Washington, D. C.

Oct. 2-4—Aircraft Sparkplug and Ignition Conf., Hotel Secor, Toledo, Ohio.

Oct. 4-6—Southeastern States Airport Operators Council, Manteo, N. C.

Oct. 11-12—Airport Management and Opns., 1951 Conf., U. of Okla., Norman, Okla.

Oct. 16-17—Fourth Annual New York State Conference on Airport Development and Operation, Onondaga Hotel, Syracuse, N. Y.

Oct. 18-20—Fifth Annual Arizona Aviation Conference, Phoenix.

Oct. 24-27—NASAO annual meeting, Arizona Inn, Tucson.

Oct. 31-Nov. 1—Society of Automotive Engineers, Fuels & Lubricants Meeting, Drake Hotel, Chicago.

Nov. 28-30—Aviation Distributors and Manufacturers Assn. Annual Winter Meeting, Waldorf-Astoria Hotel, New York.

Dec. 17—Fifteenth Wright Brothers lecture, U. S. Chamber of Commerce Auditorium, Washington, D. C.

International

Sept. 3-14—Third Int'l Conf., convened jointly by Royal Aero. Soc. and the Inst. of Aero. Sciences.

Sept. 10—IATA 7th ann. General Meeting, London.

Sept. 11—ICAO Legal Committee, 8th Session, Montreal.

Sept. 11-16—Soc. of British Aircraft Constructors, Flying Display and Exhibition, Farnborough, England.

Oct. 4—Royal Aero. Soc., 7th British Commonwealth & Empire Lecture, London.

The world's first Supersonic Spin Pit!

another "first" for the makers of Aeroprops!

Now, for the first time, propellers can be studied while spinning at supersonic speeds. Every action and reaction of new propeller designs can be watched under conditions that simulate every detail of flight.

This supersonic spin pit, developed under Navy and Air Force contracts, is in itself a radical advance in research and testing technique. And, coupled with the full facilities of General Motors, it will help increase the leadership Aeroproducts now enjoys in the field of turboprop power—the field of supersonic speed.

The Douglas XA2D with dual rotation Aeroprops is one of several Navy and Air Force planes of near-sonic speed which prove in flight the efficiency of Aeroprop design.

GM GENERAL MOTORS

AEROPRODUCTS DIVISION
GENERAL MOTORS CORPORATION
DAYTON, OHIO

Building for today
Designing for tomorrow

Aeroproducts

B.F.Goodrich

New B.F. Goodrich tire outwears all others in airline tests

A NEW IDEA in aviation tires, designed to give longer service life, has been introduced by B. F. Goodrich.

Instead of the conventional ribbed tread, the new tire has rows of "dimples" —round indentations in the rubber.

B. F. Goodrich engineers had two things in mind in developing the new design: (1) provide better distribution of the load, and (2) reduce exposure to tread cutting.

First airline to test the new BFG Dimpled tire was Braniff International Airways, who furnished the photo above. Average tire life improved so much that they have standardized on the new tire throughout their entire fleet.

Fourteen other airlines who have tested the B. F. Goodrich Dimpled tire report the same results: the new tread outwears all others used. And five airlines in addition to Braniff have made the new tire standard equipment, in the sizes tested—on DC-3s, 4s and 6s. Still more airlines are now starting to switch.

Tooling up for production of the Dimpled tire in four additional sizes is now under way at B. F. Goodrich.

The new, longer wearing Dimpled tire is the latest "first" in aviation tires from B. F. Goodrich, the leader in rubber research and engineering. *The B. F. Goodrich Company, Aeronautical Division, Akron, Ohio.*

B.F.Goodrich
FIRST IN RUBBER

ESTABLISHED JUNE 1, 1937

American Aviation

VOLUME 15 NUMBER 10

How New Leadership Will Operate ALPA

Awaiting outcome of suits over presidency, new slate plans bigger voice for pilots in union affairs.

By GERARD B. DOBBEN

WITH new leadership in prospect for the first time in 20 years, the Air Line Pilots Association, under its newly-elected president, Clarence N. Sayen, former Braniff Airways pilot, is in the midst of reorganization designed to provide:

- **An ALPA structure** with some decentralized responsibility and authority.
- **Continuous membership representation** to keep policy on an up-to-date basis.
- **Better communications** between ALPA headquarters and the field.
- **Machinery for** continuous policy making.
- **Maximum membership participation.**

These objectives were adopted by ALPA's 230-man board of directors from a report of the five-man investigating committee which it had named to look into union affairs.

Following adoption, the board, by a representation vote of 5,562 to 269, voted to remove David L. Behncke, founder and president. Sayen, who had been executive vice president, was elected president.

At this writing, Behncke and the new officers were in a court battle to determine who are ALPA's qualified officers. Behncke claimed the board meeting was not legal, and was still occupying his office at ALPA's Chicago headquarters. The new officers filed suit to oust him and to get financial records from him.

The board voted Behncke his $15,000 a year salary for life, instead of the $7,500 provided in the by-laws. Some pilots were said to be protesting this action.

ALPA funds have been tied up during the court dispute, and Judge Michael Igoe threatened to appoint a receiver unless differences were settled. These included a $2 million suit by some Behncke supporters against several board members (later withdrawn) and the suit to compel Behncke to get out of headquarters.

Until court actions have been settled, an interim committee, consisting of J. P. Talton, C. E. Beatley and D. O. Laffesty, is handling ALPA's affairs.

ALPA'S NEW PRESIDENT, Clarence N. Sayen, was a million-mile pilot with Braniff Airways. Only 32, he has a bachelor of science degree in economic geography. He believes both airlines and pilots have made mistakes in labor relations that can be corrected by an intelligent approach to the day-to-day problems.

The board's principal reasons for removing Behncke were:

His preoccupation with construction of ALPA's new $800,000 building, which originally was to cost not more than $250,000. Increase was caused by changes allegedly ordered by Behncke.

His alleged failure to press pilot contract negotiation cases.

Inability to delegate authority even in minor matters.

Office morale was said to be bad because of long hours of work under Behncke.

In a new method of keeping the membership informed, the board made a tape recording of the reasons and sent it to almost all ALPA councils. In the recordings, ALPA members who had been at the board meeting discussed the investigating committee's findings and gave their personal observations. Several of the comments came from former staunch Behncke supporters who still think of him as the "grand old man" but believe that he should step down.

The investigating committee included G. M. LeRoux, Pan American, chairman; D. E. Barnette, Southwest Airways; S. W. Camden, Jr., and V. A. Peterson, Eastern, and K. M. Ruppenthal, TWA. They heard statements from Behncke, other officers, some regional vice presidents and pilots, headquarters staff, architect of the new building, the contractor, ALPA's auditors, and educators in the field of labor relations.

The group concluded that to provide maximum representation, ALPA must have an "efficient professional organization plus a well-informed, alert and interested membership."

Here's how ALPA will function, under the committee's recommendation's as adopted by the board:

New Building: Will be completed with a minimum of additional changes. ALPA's board in 1947 had okayed $200,000 plus a 25% tolerance, if necessary, for the building. In 1949, it added $175,000. As of July 2, 1951, $520,566.91 had been spent on the building.

Building Changes

The committee found that there had been over 220 change orders processed on the building since construction started, most of them allegedly ordered by Behncke. Cost of the changes was $158,209.42, not including $3,775.77 for orders in process. Total cost of the building is now estimated at $804,970.52, not including landscaping, parking and some furnishings.

Headquarters reorganization: Behncke, the group felt, had functioned largely as a one-man organization, slowing down ALPA work by not delegating authority. The new president is to be relieved of detail work, and will concern himself with ALPA's prestige, contacts, and general public relations. Executive vice president will be the general manager, the administrative department will be headed by a secretary-treasurer, and an office and personnel manager will handle the clerical help.

Headquarters staff: This staff had

ALPA'S NEW CHICAGO BUILDING will cost $800,000 instead of $250,000 because of changes allegedly ordered by the old regime.

protested hours and working conditions under Behncke. The interim committee, with the president and executive vice president as advisors, will set new policy on pay, rules and conditions.

Financial and fiscal: Modern office methods, which haven't been used, are to be introduced. Offices of secretary and treasurer are to be combined. Excess collections for strike benefits will be credited to members' dues accounts.

Executive committee: Many of ALPA's ills, it was felt, stemmed from the fact that the pilots, under Behncke, haven't exercised sufficient control over union affairs. Therefore, a new executive committee, meeting every three months, will act as owners' representative, will have general trusteeship of ALPA business and funds, and will be charged with continuity in the pilot-management of ALPA. It will include the president, 1st vice president, executive vice president, secretary-treasurer, and five regional v.p.'s. Latter will be chosen from the pilots in the areas represented.

3 More Offices

Regional offices: There'll be ALPA offices in New York, Miami and San Francisco, each headed by a negotiator who will conclude working agreements with the airlines in his area. He will also administer the agreements and try to settle differences before they become grievances.

Washington office: Greatly expanded office will (1) have a full-time attorney on its staff, (2) handle most CAA, CAB and court hearings, (3) have an index of individual qualifications of pilots in the area so as to make use of their services in matters in which ALPA has an interest, (4) cultivate legislative contacts.

Membership participation: To obtain greater membership participation, there will be:

An ALPA paper, well-written and of timely interest.

Periodic newsletters, concise and informative.

Tape recordings on subjects of general or specific interest to the councils.

Behncke Statement To ALPA

"A small group of power-seeking men have dealt our association a very serious blow, perhaps a mortal one. They have shattered our union democracy, violated our constitution, and illegally pushed an oligarchy over our membership. It will take but a short time, but history will show, when it is finally written, that sinister outside forces assisted in the operation.

"The inner clique that directed the operation succeeded in obtaining the help of many sincere but misguided members. In the same way, Hitler, Goering and Goebbels, when they torpedoed the democratic constitution of Germany, obtained a 98.4% "ja" vote from the German people. Defenders of democracy were not popular then. Finally, after many bitter experiences, the people of Germany began their return to democracy.

"My duty to the members of the association is to do everything within my power to protect and preserve the democratic constitution and by-laws which we have created over a period of 21 years. What has occurred in Chicago during the last few days is the exact opposite of democracy.

"No loyal member of our association can recognize the recent action as morally and legally right. I have always been a passionately loyal member; I am the first member of ALPA; I hold irrevocable membership No. 1; but I am only *one* member. There is a responsibility to *all* our members to protect the integrity of our constitution. If the clique of ruthless men is bent on physically taking over our headquarters I cannot forever singly prevent the unlawful seizure.

"I am still your constitutional president and I am ready and well able to perform all my constitutional duties. The attempted removal of your president was clearly illegal but the job of protecting our constitution is one that I can only share with you.

"At the moment the tremendous protection which the association has given our members has made them soft and complacent, as our country was after a long period of peace and security, and they have permitted the current illegal putsch.

No Resignation

"I am ready to join the members in resisting any illegal raid and I do not and would not resign my office; but in the face of complacency I cannot by myself resist the physical incursion of the putsch into headquarters.

"The meaning of current developments to the association is tragic. For some time the momentum of 21 years of uninterrupted success which raised the airline pilots from the truck driver category in which they were placed to the highest professional status of any organized group in the world, will probably carry the association along after a fashion but if rivalries flare up then the men who today first shattered the association's democracy to seize power will do so again and more brazenly next time.

"The most substantial beneficiaries today and in the future will be certain selfish airline carriers.

"It now appears that my continuous and vigorous work of 21 years as founder of our profession and as founder and president of our association will be illegally suspended. In my work I have been privileged to bring tremendous improvements to our profession . . .

"I am confident that the American airline pilot will one day spectacularly affirm his faith in association democracy and will make known his faith by his works.

"May God prosper and guide him always."

U. S. Blueprints More Aid for Helicopters

New ACC policy outlines support federal agencies should give to commercial development.

THE United States government, through the Air Coordinating Committee, has now officially adopted a policy of continued and broadened support of commercial helicopter development and utilization.

The official report outlining the ACC policy, entitled "Federal Policy Regarding the Development of Commercial Transport Helicopters," proposes a constructive program of action to be followed by each of the Federal agencies connected with helicopter development and operation:

Post Office Department

Continued use of existing helicopter mail services in Los Angeles and Chicago and maximum use of such additional metropolitan services as CAB certificates in the future.

CAB

Continued encouragement of existing helicopter services.

Similar services should be authorized in other large metropolitan areas as required by convenience and necessity.

Study probable impact of multi-engined transport helicopters on the travel market in connection with future route pattern planning and route proceedings.

Continue its generally sympathetic and promotional approach in formulation and application of helicopter rules and regulations.

CAA

Collaborate with CAB in sympathetic and promotional approach in the formulation and application of Civil Air Regulations.

Under Public Law 867, the prototype law, request funds for testing and simulated airline operation of transport helicopters. Such tests should take into consideration the military operational experience of helicopters.

Through the Technical Subcommittee of the Prototype Aircraft Advisory Committee draft specifications for one or more transport helicopter types of advanced design.

Study communications, traffic control, navigational and landing aid facilities and related operational aspects of such helicopters.

Continue its study of heliport requirements and make appropriate provisions for heliport construction in the Federal Aid Airport Program.

Offer airport advisory service to communities including heliport construction, maintenance and operation information.

Defense Dept.

Through established claimant agency procedures permit purchase of a number of transport helicopters by commercial airlines for prototype testing and simulated airline operation when the international situation permits.

Make available on loan or otherwise to designated contractors a limited number of transport helicopters for prototype testing under Public Law 867.

NACA

NACA should increase its emphasis on basic rotary-wing research covering stability, fatigue, rotor blade sections, anti-icing, instrument flight, drag and power requirements of compound helicopter configurations and design parameters for higher flight speeds.

Immediate importance of this newly adopted policy can best be realized by its history. The ACC report is the result of a six months study by the Helicopter Working Group under the chairmanship of CAA's R. K. Waldo. The Working Group was established by ACC to carry out a Post Office Department request for an objective study to determine "whether the Federal Government should continue its support and encouragement of" helicopters and if so to what extent and in what manner.

Commercial Versions of Military Transport Helicopters*

Manufacturer	Commercial model	Military designation	No. of main rotors	No. of engines	Normal gross weight (lbs.)	Maximum normal passenger capacity[1]	Cruising speed (m.p.h.)	Military status[2]
Bell	48A	YH-12	1	1	6,513	8	86	P
	D-128	XHSL	2	N.A.	N.A.	N.A.	N.A.	D
Hughes	205	XH-17	1	2	59,000	70	116	D
Piasecki	——	HUP-1	2	1	5,450	7	100	P
	PD-22	H-21	2	1	11,500	15	120	P
	PD-15	XH-16	2	2	N.A.	44	N.A.	D
Sikorsky	S-55	H-19, HO4S	1	1	7,300	8	86	P
For Comparative Purposes: Helicopters Used in Present Metropolitan Area Services.								
Bell	47	——	1	1	2,200	1	85	
Sikorsky	S-51	——	1	1	5,500	3	85	

*Excluding commercial versions of McDonnell and Sikorsky Assault Transports, on which details are still classified.

[1] Without provision for "streetcar-type" seats.

[2] P = in production; D = under development.

SEEKING A U. S. TERMINAL for Panagra are the W. R. Grace directors of the airline. They are, left to right: Harold J. Roig, former Panagra president; Howard Clark, a vice president; Benjamin Oehlert, and Andrew B. Shea, Panagra's president.

Battle for Latin America Nearing Climax

Panagra loses interchange with National as Braniff gets CAB approval to serve Miami.

By WILLIAM V. HENZEY

THE MOST complex and the most bitterly-fought airline proceeding in history moved slowly forward toward a climax last week as the Civil Aeronautics Board rescinded its earlier approval of a New York-Latin America interchange between National Airlines and Pan American-Grace Airways (Panagra) and authorized Braniff Airways to serve Miami on its route between Houston and Havana, Cuba.

But this latest set-back in its long-sought goal of flying to New York did not deter Panagra. It immediately renewed its application for its own route or trackage rights.

Meanwhile, with the National-Panagra interchange nixed for the present, at least, the center of attention will now be focussed on the vast and unwieldy CAB package known as the *New York-Balboa Through Service Proceeding* which involves the ambitions and rivalries of six airlines.

At stake is the great air traffic potential between the U. S. terminals of New York and Chicago and all of South America. But no case has become so involved with so many baffling factors, the most important of which is perhaps the feud between the two equal owners of Panagra—W. R. Grace & Co. and Pan American World Airways.

In the coming battle before the CAB any one or more of the following possibilities could result:

A new form of ownership for Panagra.

A Panagra extension from Balboa to New York, or loss of Panagra's present trackage rights over PAA's Miami-Balboa route.

A Braniff extension from Havana to Miami and possibly New York.

An Eastern extension from Miami to Havana.

A New York-Latin America interchange via Panagra and National.

A New York-Latin America interchange via Pan Am and Eastern with Panagra a possible participant.

A New York-Latin America interchange via National and Braniff at Miami or Havana.

A New York-Latin American interchange via Eastern and Braniff at Miami or Havana.

Possible new route grants to Chicago and Southern or Delta.

Focal point of the proceeding, however, is the bitter dispute between Pan Am and W. R. Grace & Co., each of which owns 50% of Panagra and each of which nominates four of the company's eight directors.

'Negative Control'

For 15 years, Panagra has been prevented by what the Grace people call "Pan American's negative control" from gaining entry to the continental U. S. Within a whisper of the synthetic route to New York that the National interchange would have provided two weeks ago, Panagra instead is faced once again with the maze of red tape associated with a CAB economic proceeding.

Andrew B. Shea, president of Panagra and a Grace nominee to Panagra's board, has estimated two years for completion of the new CAB proceeding. But CAB has ordered hearings to begin no later than October 1, with an eye to reaching a decision much sooner than the two years envisaged by Shea.

The present dispute, rivaled in bitterness only by previous controversies between the same firms, stems from National Airlines' so-called "repudiation" of stock option agreements last December. But it maintains the inherent characteristics which marked the earlier feuds, namely, Grace's desire to get Panagra into the U. S. and Pan Am's desire to keep it in its place.

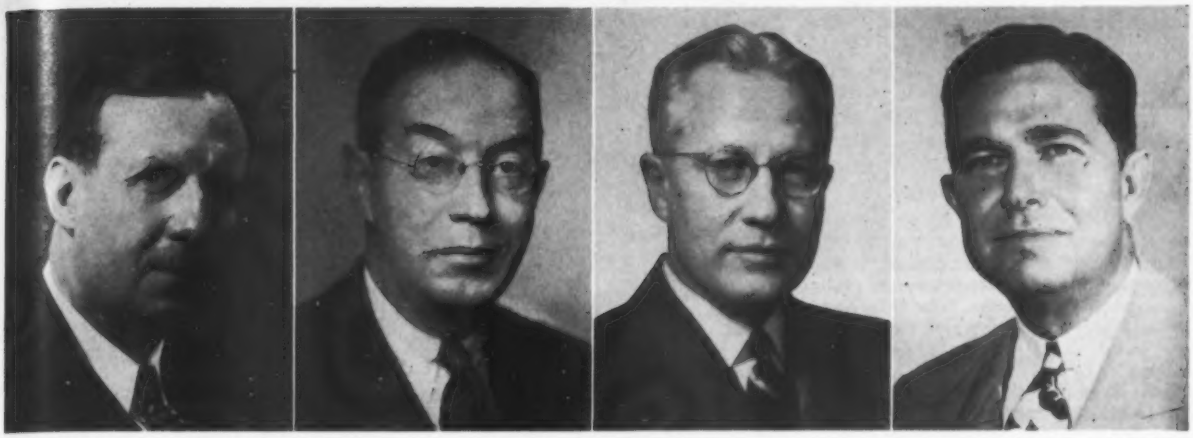
Perhaps the most harmonious relationship enjoyed by the two firms was when they agreed in 1928 to pay $15,000 for a small Peruvian air service known as Huff-Daland Dusters, Inc. This was the link needed to provide a through service between the Panama Canal and Valparaiso, Chile.

Following year, Panagra was awarded a mail contract and thereafter extended southward to Buenos Aires. But it was not until 1946 that it was granted even the token entry to the U. S. that the trackage agreement with Pan American permitted between Balboa and Miami.

During the interim, the Grace interests sought to have Panagra apply to CAB for route extensions from the Canal to the U. S., but Pan Am, through its 50% voting power, prevented such filings.

In 1941, Grace petitioned CAB to institute a proceeding to compel extension of Panagra's route to the U. S. In 1942, it followed with another petition to force Pan Am to divest itself of its "negative control" of Panagra.

Three years later, the entire affair, unsolved, was in the U. S. Court of



OPPOSING A U. S. TERMINAL for Panagra are the Pan American World Airways' representatives on the airline's board. Left to right: Erwin Balluder, PAA vice president; Henry J. Friendly, vice president and general counsel; John Leslie, vice president, and Wilbur L. Morrison, vice president-Latin American Division.

Appeals and though CAB was directed by the Court to take affirmative action, Board called off any plans it may have had when the parties agreed in 1946 to the Miami-Balboa trackage arrangement, known as the Through Flight Agreement.

Pan American's opposition to route extension of Panagra into this country is based largely on the contention that Panagra is essentially Pan Am's connecting route for west coast South American business. Also, the Panagra west coast route between Miami and Buenos Aires is shorter than the east coast service offered by PAA via Brazil, so that Pan Am would, if Panagra got Miami or New York on its own, have a half-owned subsidiary with a more direct route.

Further, Pan Am claims that the Grace people, with their steamship interests, seek to dominate the travel market between the U. S. and Latin America by gaining control of an airline.

15-Year Battle

Perhaps the greatest tribute to the validity of the arguments of both companies is the fact that the basic issues are still unsettled after 15 years.

The pot that began to boil last December when National called off the stock option agreements, however, may have generated enough steam to dissolve the perennial deadlock, one way or another.

What National backed out of was agreements under which Pan Am and Grace would acquire 30% and 18% respectively, of NAL's stock. Inter-related also were interchange agreements involving the three carriers. When the stock deal fell, Pan Am's president Juan Trippe, incensed at National's action, had no desire for the interchange possibilities. Grace, however, seeing another possibility for an entry to New York, strung along with National.

In its back pocket, Grace also had 174,000 shares of National stock which it bought in 1949, so that cancellation of the stock option agreements by National did not affect its stock interest in that company to any material extent.

But Grace, until July 19 of this year, had more than that. It had a Civil Areonautics Board which voted 5-0 in favor of a Panagra-National interchange to be operated at least until final decision in the New York-Balboa Case.

Approval Was Tentative

The decision was termed a "tentative approval of a temporary interchange" and was to be made final following oral argument. Meanwhile, Pan American and other opponents of the interchange urged CAB to go into Grace's financial interest in National.

Therefore, to remove any obstacle that the stockholdings might present, Grace on July 19, re-sold the stock to National at what has been estimated at a $1½ million profit. This was done, however, without knowledge of a CAB decision announced July 20, but actually arrived at July 13, which rescinded approval of the interchange—by a 5-0 vote.

In that same decision, in which CAB conceded the matter was too complex to be decided without full-scale hearings, Braniff Airways emerged as a major factor in the New York-South America air travel market.

It was authorized by exemption to route its Houston-South America flights via Miami, thus giving both Pan American and Panagra a new opponent for connecting business with National, Eastern and Delta at Miami.

Of even greater significance was the fact that Braniff also had applied for a New York-Miami route and if, at this stage of the proceeding, CAB saw fit to answer the PAA-Grace feuding with an entry to Miami for Braniff, what would stop it from shoving Braniff right into New York if the PAA-Grace battle continues?

It must be remembered, however, that Braniff, when originally awarded a Latin America route, was expected to be a competitor of Pan American. But with a connection at Havana with National as its only means of competing in the New York-South America market, original plans for Braniff went somewhat astray since National turned over most of its business at Miami to Pan Am and Panagra.

Thus, the temporary Miami award to Braniff is not simply a warning gesture to Pan Am and Grace, but is a recognized move to permit Braniff to function in the manner originally intended—as a bona fide competitor of Pan American.

It may well be, however, that Pan American and Grace will take a cue from Braniff's entry into the picture and resolve their differences. But developments since the Braniff award lend no support to the conclusion.

Withdraws Support

Most recent move by Pan American was withdrawal of its support of a provision in the Through Flight Agreement under which PAA agrees to cast its votes for a Grace nominee to the presidency of Panagra and which specifies that Panagra's president shall be "in responsible charge of its management."

And at the tension-packed prehearing conference in the New York-Balboa Case last week, Grace served notice that its "On to New York" motto for Panagra still stands.

Something must give soon and the New York-Balboa proceeding should see the climax of aviation's bitterest battle.

People in the News

LIGHTPLANE MAKERS met in Washington recently to discuss materials problems. Seated (clockwise from left foreground) are: Wiley Wright, CAA Aviation Development Office; Admiral D. C. Ramsey, AIA president; CAB Chairman D. W. Nyrop; George E. Gardner, air transport mobilizer; Charles O. Cary, executive secretary, ACC; Robert Duffie, Aero Design & Engineering Co.; W. T. Piper, president, Piper Aircraft Corp.; J. P. Gaty, vice president, Beech Aircraft Corp.

NORTHWEST AIRLINES sales officials plan schedules and promotional strategy. Seated, left to right, are J. P. Farrell, Orient sales manager; Amos Culbert, vice president-sales; K. D. McKenzie, eastern region sales manager, and R. G. Collins, central region sales manager. Standing, G. E. Hatch, western region sales manager; S. F. Wyman, administrative assistant to Mr. Culbert; J. W. Mariner, general sales manager, and L. B. Kinports, director of passenger sales.

RUSSELL B. ADAMS, special assistant to the Secretary of State and former CAB member, is now a Pan American World Airways vice president. He is located in Washington.

AIRCRAFT PRODUCTION BOARD chairman, and Defense Production Administration's Deputy Administrator for Aircraft Production is Harold R. (Bill) Boyer, on leave from General Motors Corp.

FIRST WOMAN VICE PRESIDENT of an airline is Carlene Roberts, recently promoted by American Airlines. Miss Roberts joined American in 1938 and is now in charge of AA's Washington office.

SIMPLICITY OF COCKPIT CONTROLS associated with "Easy Joe," the newly designed steering control which puts the autopilot to work as a booster system for the human pilot, is shown here. "Easy Joe" has been test-flown 15 times in Minneapolis-Honeywell's company-operated DC-3. The two small units on the control wheel are the only cockpit components of the system other than a master on-off switch.

M-H Reveals New Electronic Controls

Minneapolis-Honeywell's 130 design teams produce systems to make pilot's job easier.

By WILLIAM D. PERREAULT

IMPORTANT things are going on at Minneapolis-Honeywell Regulator Company.

They're reflected in the new multi-million dollar aeronautical engineering building now nearing completion and the more than 500% increase in engineering research and development which has taken place at the company's aeronautical division in the past two years.

Earlier this month Minneapolis-Honeywell drew aside the curtain of secrecy which surrounds so much of its work and disclosed for the first time a few of the many projects which occupy the time of its 130 design teams. Among the more interesting projects revealed were:

- **An improved fuel gauging system** which opens the way to dependable gauges calibrated in "flight time remaining" rather than in pounds or gallons.
- **A center of gravity control system** closely integrated with the fuel system controls of fighter aircraft.
- **A new type autopilot control** which will simplify cockpit instrumentation, ease pilot fatigue and make the autopilot a useful instrument in take-off and landing as well as en route.
- **An entirely new altitude controller** which is 10 times as sensitive as any previous unit. This unit opens the way for new concepts in altimeter and rate of climb instruments.
- **Improved temperature controls** which will make the cockpits of fighter aircraft a better place in which to work.

For many years fuel quantity has been registered in the cockpit on an instrument showing the number of gallons of fuel remaining. These gauges were operated by floats in the fuel tank measuring fuel level. As ambient temperature changed fuel volume automatically changed. It also changed as a result of aircraft attitude and many other variables.

Since the end of World War II there has been a rapid change-over in new aircraft to an electronic fuel-gauging system not affected by temperature changes or aircraft attitude. This capacitance type gauge uses the electrical characteristics of the fuel to measure fuel quantity. While fuel volume or attitude still change, the cockpit gauge remains constant unless fuel is actually added or removed.

The introduction of turbine-powered aircraft complicated this system. Unlike piston engine fuels, the wide variety of jet fuels introduced wide variables in the electrical characteristics of successive tanks of fuel. Minneapolis-Honeywell has now solved this problem and in doing so opened the road to several other important developments.

The problem was overcome by installing a reference unit within the fuel tank. This provides a Fuel Deviation Index which automatically calibrates the electronic gauging system to the fuel in the tank. It is simple in design and can be incorporated in the fuel tank or in the engine fuel plumbing. It is now in production for the USAF.

The accuracy of this system is such that it can be depended on to control other operational factors. In present-day fighter aircraft the designers have found it necessary to put engine fuel wherever space is available. As this fuel is burned off in flight the aircraft center of gravity changes, complicating the pilot's control problem.

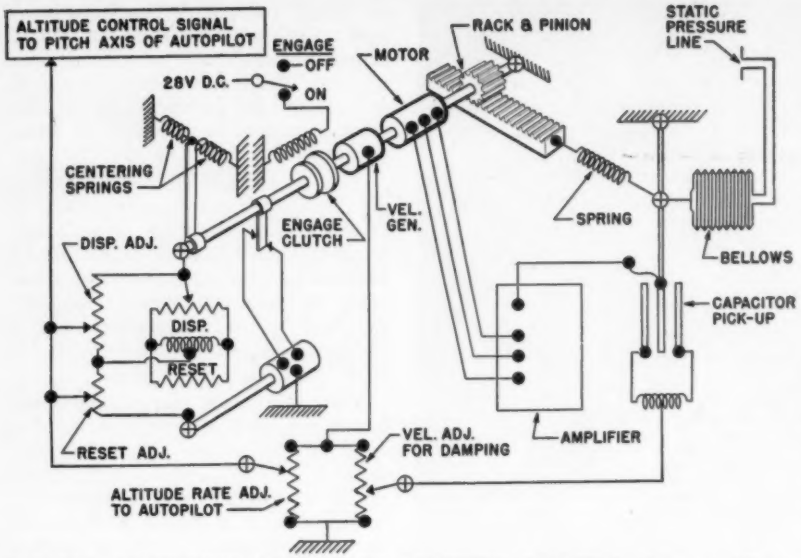
AF Contract

Minneapolis-Honeywell is now working on an Air Force contract which will use the improved electronic fuel gauge to control fuel valves which will automatically shift fuel from tank to tank as required to maintain the proper center of gravity throughout the airplane's flight.

"Easy Joe" is another interesting development which has been underway for two years but is still classified experimental. In the company's Douglas DC-3, this new device has made over 15 flights and has proved that autopilots are soon to have a new role in aircraft control.

"Easy Joe" is a modification to a standard M-H E6 autopilot such as used in the Boeing B-29 and B-50 and in the Convair B-36. Normally an autopilot is either "on" or "off". It's "off" during take-off and landing, "on" in certain cruising conditions. "Easy Joe" may well be a full-time autopilot. Certainly it'll simplify pilot control problems and eliminate some of the pedestal controls.

M-H has moved the electrical circuits normally incorporated in the autopilot control knobs into the control wheel and column. Using the slight amount of resilience normally rigged into the neutral control system position, a mechanical connection has been designed which varies the balance in these elec-



CAPABLE OF SENSING THREE-INCH ALTITUDE CHANGES, the new Minneapolis-Honeywell constant altitude controller, shown here in diagram, will introduce new concepts of altimeter accuracy and may make possible a rate of climb instrument with instantaneous reaction. Bellows unit (right) senses pressure change and moves center plate of capacitor. This arrangement virtually eliminates friction in system. Unbalanced condition in capacitor is used to supply signal to the pitch axis of the autopilot via the amplifier. A follow-up motor keeps returning the capacitor to an electrically balanced condition.

trical circuits each time the controls are moved.

Instead of having to transfer his attention from the control wheel to the pedestal-mounted control knob when transferring the job of flying to the autopilot, the human pilot will now be able to change aircraft direction or attitude simply by moving the normal control. The separate control box will be eliminated.

Work Load Relieved

It all amounts to having boosters on the primary controls. These are one manpower boosters represented by the autopilot servo motors. When the pilot moves the control wheel to change the aircraft attitude, the initial movement moves a potentiometer in the electrical circuit of the autopilot. This signal causes the autopilot servo motors, connected into the control cables, to start banking the aircraft. The pilot gets a normal sense of "feel" but actually the work load is carried by the mechanical units.

The pilot always has complete control, yet work load is virtually eliminated. Of no small importance is the fact that the system is simple, requires virtually no increase in weight, eliminates existing autopilot controls in critical area and can readily be adapted to existing installations.

An altitude controller is a device connected into an automatic flight control system to keep the aircraft at a constant altitude once it is leveled off in cruising flight. Normally this is accomplished by a pressure sensitive bellows which responds to changes in barometric pressure if the aircraft tends to drift above or below its pre-set level. Its accuracy is dictated by friction within the mechanical components, which convert movement of the pressure detecting unit to electrical signals which are used to activate the autopilot and correct the condition.

Normally an altitude sensing unit, because of friction considerations, cannot detect a change in altitude of less than 30 inches. Minneapolis-Honeywell has developed a Constant Altitude controller which can detect as little as 3 inches change in altitude. This has been accomplished by a completely new concept in altimeter design which in itself has opened up great possibilities.

3-Plate Condenser

Heart of the M-H controller is a large three-plate condenser. Two of these three plates are mechanically fixed, with the third floating between the fixed units. If the center plate is in dead center both sides of the condenser have the same electrical capacity. If the condenser center plate is moved toward either side it changes the capacity of that side of the condenser, generates an electrical signal which is amplified and used to activate the autopilot circuits which correct the change in altitude.

The sensitive pressure operated bellows is directly linked to this center plate. Virtually eliminating friction, the system provides altitude sensing 10 times better than previous methods. Once the circuit is out of balance a follow-up motor is used to center the condenser when the autopilot is not operating. When the autopilot is using this circuit, the corrective action of the pilot keeps the altitude constant and the bellows performs this service.

Any change in altitude is immediately accompanied by movement of the follow-up motor in the altitude controller. By tapping the rate generator now used in the controller to prevent hunting, a rate climb unit can be provided which will also be free of the normal friction lag of such instruments. At present this lag represents about seven seconds' time and M-H feels it can be virtually eliminated.

The air temperature in a jet fighter plane cockpit can change as rapidly as 40 degrees per second. Controlling the 750-degree Fahrenheit air discharged from the engine compressor into the air conditioning system, blending it with cold air from the outside and keeping the pilot comfortable is a delicate job. As the principal manufacturer of aeronautical temperature control systems, Minneapolis-Honeywell is in the thick of this problem.

Two Refinements

It is not a new problem but rather one of degree. To meet this challenge, M-H has recently made two refinements over previous systems. One of these is a temperature-sensing element which will operate in the Mach 1 airflows now experienced in the air conditioning ducts. This unit features a shielded detector with aerodynamic spoilers to deflect inlet air over its surfaces at lower speeds. Another device has been a rate of temperature change indicator which will permit hot and cold air duct controls to move in relation to rates of change in temperature.

These are but a few of the many Minneapolis-Honeywell developments which include virtually every type of electronic control used in aircraft and guided missile work. The company is expanding both engineering and production rapidly but one point is particularly interesting: M-H's four-year engineering budget, which allotted $1,671,747 for 1949 and will amount to $4,700,000 this year—$5 million in '52—was set two years ago, before the present military build-up. The Korean conflict, although accelerating the schedule, has not distorted the company's long-range program.

REPORTED WINNER of the USAF search and rescue aircraft competition, held at Eglin AFB, is the Douglas YC-47F—a beefed up version of the Super DC-3 grossing 41,000 pounds and using Aerojet Jato bottle and a parachute stepup performance. No production contract has been awarded as yet but initial intent was for an order of 40-100 planes. Reports indicate military is interested in having Douglas set up new production line rather than modifying old C-47's.

Taylorcraft Tests New Diesel for Lightplanes

A 125-horsepower diesel engine has recently been test-flown in a Taylorcraft Model 18 lightplane.

The engine, built by Diesel Power Corp. of Pittsburgh and Los Angeles, weighs 235 pounds and is now being prepared for CAA certification tests. Installation of the engine in the Taylorcraft and initial flight tests are being handled by Taylorcraft, Inc. at the Conway-Pittsburgh Airport.

The four-cylinder Diesel Power Corp. engine has approximately the same dimensions as a conventional piston engine, but the prototype now installed in the Taylorcraft uses an oil pump which is larger than the production engines will have. This pump has required a slight change in cowling arrangement.

Taylorcraft has an agreement with Diesel Power Corp. which gives the lightplane manufacturer exclusive rights to the diesel engine in all models up to 500 horsepower. Taylorcraft has no immediate plans for designing a new plane for the diesel engine since it is readily adaptable to current production models.

Principal advantage of the diesel engine will be the sharp reduction in fuel consumption, ability to use lower-cost fuels and the elimination of ignition and carburetions systems—both units which account for high maintenance costs of lightplanes.

Burning ordinary diesel fuel, which costs about 13c per gallon, the four-cylinder engine operates on about one-third the fuel of conventional gasoline engines.

Non-Skeds Double Their Traffic

Although many of the U. S. large irregular air carriers had fallen out of the picture through revocation of their letters of registration or otherwise, the group as a whole showed a better than 100% increase in revenue passenger-miles flown during the first quarter of 1951, compared with the like period of last year.

Reports filed with the CAB by the 35 non-skeds still in business in the first three months of this year aggregated 126,711,501 passenger miles, as against 61,010,283 passenger miles reported by 45 non-skeds in the same quarter a year before.

While the increase was impressive, the passenger-mile total of all the non-skeds was less than the traffic of a large certificated carrier such as American or Eastern for a single month, and it barely topped the 121,109,000 passenger-miles flown by Capital Airlines in the same quarter.

Largest non-sked submitting a first quarter report was Great Lakes Airlines Inc., with 12,643,293 revenue passenger-miles, followed closely by Monarch Air Service, with 11,035,881. Both of these carriers showed substantial increases over their traffic in the same 1950 period.

The jump in non-sked business may well be considerably larger than appears from the CAB figures, because some lines that are operating have not filed reports.

Revenue passenger-mile comparisons of the non-sked group follow:

	1st Quarter 1951	1st Quarter 1950
Aero Finance Corp.	5,563,000	.....
Air America, Inc.	.....	3,372,517
Air Services, Inc.	623,000	548,320
Air Transport Associates	4,776,000	.....
Airline Transport Carriers	.....	390,200
American Air Transport, Inc.	8,251,000	.....
American Flyers, Inc.	199,768	168,879
Argonaut Airways Corp.	47,434	.....
Arnold Air Service	218,000	.....
Arrow Airways	.....	7,980,776
Associated Air Transport	.....	100,559
Blatz Airlines, Inc.	840,000	475,617
Capitol Airways, Inc.	824,270	415,808
Central Air Transport	6,846,000	.....
Continental Charters, Inc.	7,138,594	.....
Economy Airways, Inc.	3,999,000	1,965,480
Federated Airlines, Inc.	.....	5,248,410
General Airways, Inc.	281,000	.....
Great Lakes Airlines, Inc.	12,643,293	2,292,514
Kesterson	1,302,000	.....
Los Angeles Air Service	7,540,000	619,300
Paul Mantz Air Services	.....	126,382
Meteor Air Transport	6,000	87,424
Miami Airline	5,545,427	.....
Missouri Airways	.....	60,000
Modern Air Transport	9,686,860	5,045,180
Monarch Air Service	11,035,881	1,048,882
New England Air Express	5,966,486	.....
Overseas National Airways	7,345,000	.....
Oxnard Sky Freight	.....	7,156,719
Peninsular Air Transport	5 221 000	.....
Quaker City Airways	116,840	11,286
Robin Airlines	116,000	595,000
Royal Air Service	.....	309,487
SSW, Inc.	4,082,000	273,721
Seaboard & Western	6,196,199	.....
Standard Air Cargo, Inc.	1,522,015	.....
Stewart Air Service	411,000	249,012
Southern Air Transport	864,634	.....
Trans-American Airways	2,800,000	4,244,732
Trans-National Airlines	1,270,000	565,543
Twentieth Century Airlines	1,922,000	.....
U. S. Aircoach	160,000	58,535
World Airways, Inc.	1,352,000	.....
Viking Air Lines	.....	17,800,000
Totals	**126,711,501**	**61,010,283**

AN UNPROTECTED FUEL TANK is struck by a .5-calibre incendiary. As an explosion is generated within the tank, rapidly rising pressure structurally deforms the tank and this is followed by a flash fire which destroys the aircraft.

How to Prevent Fuel Tank Explosions

Simmonds Aerocessories tests British-designed system which acts in 10 millionths of a second.

ONE of the more promising developments in the field of aviation safety, a system designed to suppress explosions in fuel tanks and other areas exposed to combustible mixtures, is now under test by Simmonds Aerocessories, Inc. at Tarrytown, N. Y., in cooperation with aircraft manufacturers.

Known as the Graviner Explosion Suppression System, the device was developed by the Graviner Manufacturing Company, Ltd. and the British Royal Aeronautical Establishment in cooperation with de Havilland Aircraft Company. It depends on detecting an explosion while it is in its earliest stages—within a few millionths of a second after ignition occurs—and discharging a suppressant which prevents it from generating high pressures and temperatures.

To accomplish this end, two basic units are used:

• **A detector,** which is a small cylinder containing two pressure-sensitive diaphragms. Each diaphragm carries an electrical contact. When there is a rapid rise in tank pressure, to the extent of one pound per square inch within 10 millionths of a second, the diaphragms are forced together completing an electrical circuit to the distributor.

• **A distributor,** a semi-spherical bakelite container about the size of a cup, which is filled with carbon tetrachloride, water or some similar fluid, and which has a detonator buried within it. The electrical circuit from the detector sets off the detonator and disperses the suppressant over an effective radius of 18 inches.

Depending on the suppressant used, the cooling action or the combined cooling and chemical action instantaneously prevents the further increase in pressure and temperature and the explosion is suppressed without structural or heat damage.

The action is best illustrated by the accompanying photos. Taken on a 35-millimeter film at 100 frames per second, these photos show the effect of firing a .5-calibre incendiary through two separate tanks, one provided with the Graviner System, the other without it.

The unprotected tank (above) fails structurally as the pressure builds up and then bursts into flame which consumes the whole structure. The protected tank (below) experiences a minor pressure build-up, not enough to damage the structure, and that is about all.

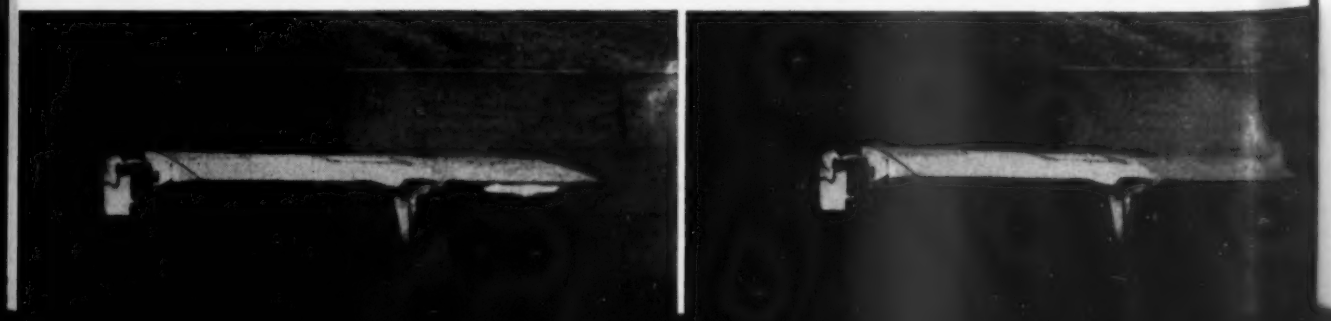
While this is primarily a one-shot protection, set off automatically by the pressure rise occuring in the early stage of an explosion, there is a degree of residual protection for some time after discharge and multi-shot systems are being considered.

Fuel pressure from crash impacts can be made to operate the detector, in which case, it is felt, the explosion-suppression system could minimize or completely prevent fires following aircraft accidents.

Only one detector is normally used in a tank but the number and size of the distributors depends on the fuel capacity and tank dimensions. It takes about 8 cubic centimeters suppressant to protect one U. S. gallon of fuel. Distributors are made with from 100 to 500 cubic centimeter capacity.

Although other systems of fuel tank purging to protect aircraft against explosions have been in use for some time, this method is attracting considerable interest because of its unique operation. Normally the system is dormant, requiring no replenishing, servicing or other attention. It is always on guard, whether in the air or on the ground, and it does not require any attention on the part of the pilot at any time. It is light-weight and independent of other systems.

A TANK PROTECTED by the Graviner Explosion Suppression System, now being manufactured by Simmonds Aerocessories, is subjected to the same incendiary. The 35-millimeter film, operated at 100 frames per second, catches a wisp of smoke but before the pressure and temperature reach dangerous proportions the explosion has been successfully suppressed.



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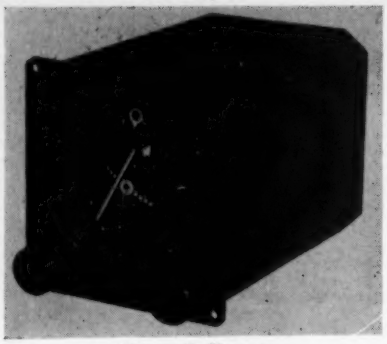
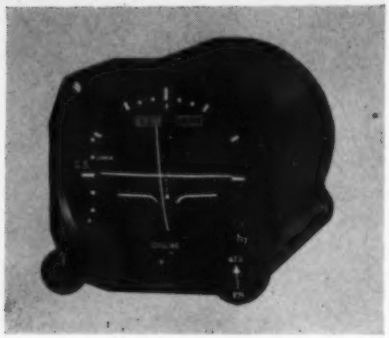


Course Indicator



Approach Horizon

Collins Combines Flight Instruments

Newly-designed approach horizon, course indicator simplify ILS and omni-range flying.

VIRTUALLY every pilot has at one time or another complained that what the instrument panel needed most was a complete rework, particularly the flight group. This month Collins Radio Company, Cedar Rapids, Iowa, disclosed that it had decided to do something constructive about the flight group.

Collins has started a demonstration tour in its Twin Beech giving airline pilots their first opportunity to fly the newly designed integrated flight system which has been under development at Collins for the past few years. A limited number of pilots have now had the opportunity to fly the Collins flight panel and reports indicate reaction is highly favorable.

Key feature of the Collins Flight Panel is simplicity. There are only four instruments in this group including the common altimeter and air speed indicator. The innovations are two new Collins units: the approach horizon and the course indicator. Each of these is a versatile instrument combining functions never offered before, and improving the presentation of those which have been available.

While primarily designed for use with the Instrument Landing System, the integrated flight instrumentation system is also usable for en route navigation. The approach horizon (see photo) bears close resemblance to the ordinary artificial horizon.

With the approach horizon, it's the extras that count. The extras are provided in the form of position information with respect to the glide slope, and steering information for precise ILS approaches. Position relative to the glide slope is provided by a small horizontal needle on the left side of the instrument. By matching this needle with the pitch indicator, the miniature airplane on the instrument face, the pilot knows he is on the proper glide path.

The vertical needle on the face of the approach horizon provides steering information. Taking signals from the localizer receiver, compass and vertical gyro, via the steering computer, the approach horizon converts them to left-right movement of the vertical needle.

All the pilot has to do to make good the localizer course to the runway centerline is to keep the vertical needle centered. It might be said that this needle has the ability to anticipate the aircraft's path. If the signals generated in the related instruments indicate the aircraft is making good a course which will bring it onto the localizer beam, the approach horizon tells the pilot by simply remaining centered.

Eliminates Bracketing

During final approach from the middle marker the approach horizon is the only instrument which the pilot has to monitor. By providing this type of signal, the approach horizon eliminates the bracketing normally associated with ILS approaches.

As arranged in the Collins system, the steering computer feature is not usable when flying the omni-range but, by setting the right hand knob on "HDG," the steering computer and approach horizon will provide the same quantitative steering information relative to the heading selected on the course indicator instrument.

Two flag alarms are provided on the face of the horizon, normally retracted out of sight, and warning of signal failures in either the localizer or VOR portions of the system.

The course indicator provides a pictorial presentation of the plane's position including:

Displacement with respect to a given omni-range or localizer course;

Compass heading and deviation from a selected course;

To-From information with respect to an omnirange station;

Bearing information to or from an omnirange station.

To accomplish these multiple services the course indicator incorporates an azimuth or directional reference card forming the outer rim of the instrument and driven by the aircraft's directional gyro. This provides a continuous indication of aircraft heading and displacement from the ILS or VOR course when matched with the fixed lubber line. A heading selector knob is provided on the face of the instrument (see photo) to index the selected course heading.

To select a given VOR or localizer course, the course selector knob on the face of the instrument is turned until the interconnected arrow-shaped position indicator aligns with the proper compass heading. The position indicator rotates with the card following aircraft movement.

Shows Deviation

Left-right signals from the omnirange or localizer power the face-wide course line bar, deflecting it in direct relation to the aircraft's displacement from the chosen course. This same bar rotates within the instrument in response to changes in aircraft direction. This dual motion, across the face in response to course signals and rotary in response to changes in aircraft direction, shows the pilot the aircraft's displacement from the selected course and the direction of the course in relation to aircraft heading.

An ordinary omni-bearing indicator incorporates a "To-From" indicator to prevent possible ambiguity. When the aircraft is approaching the station, a flag warns the pilot accordingly, and as the plane passes over the station this flag changes to read "From." In the course indicator this is taken care of by an indicator which is always readily visible.

If the aircraft is approaching the station it appears on the same side of the instrument as the position indicating arrow. As the plane passes over the station it automatically switches to the tail of the arrow.

A thin aircraft outline is painted on the instrument glass. This aircraft combines with the movement of the course line bar to provide a simple directional signal for the pilot. If the miniature aircraft is headed toward the course bar the plane is approaching the selected course whether on the omni or localizer signal, inbound or outbound on either the front or back course of the localizer.

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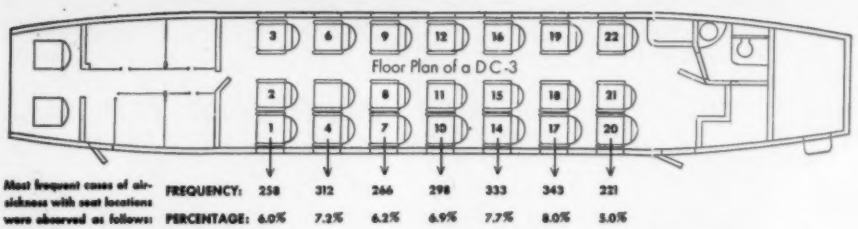

Floor Plan of a DC-3
3 6 9 12 16 19 22
2 5 8 11 15 18 21
1 4 7 10 14 17 20
Most frequent cases of airsickness with seat locations were observed as follows:
FREQUENCY: 258 312 266 298 333 343 221
PERCENTAGE: 6.0% 7.2% 6.2% 6.9% 7.7% 8.0% 5.0%

Less frequent cases of airsickness:

SEAT NUMBER	FREQUENCY	PERCENTAGE
18	184	4.3%
15	182	4.2%
12	181	4.2%
19	177	4.1%
16	171	4.0%
6	170	3.9%
2	167	3.9%
5	167	3.9%
11	154	3.7%
3	152	3.5%
21	146	3.4%
9	141	3.2%
22	128	2.9%
8	123	2.8%
	4274	

CONTRARY TO POPULAR OPINION airsickness does not appear to be more prevalent among passengers seated in the rear of the airplane. Actually, Capital Airlines' tests, based on more than 5,000 cases of airsickness in Douglas DC-3's, indicate that the susceptibility to airsickness is more pronounced on the left window row of seats than in the center or right row.

Tests Show Airsickness Can Be Stopped

Dramamine proves effective in airline tests; seat location important in preventing illness.

DESPITE rapid advances in virtually every phase of aviation medicine, there were many years during which the major comfort offered to the airsick passenger was a light dose of sedative. In the postwar years, this has been sharply altered by dramamine, a preventative and cure for airsickness, discovered by G. D. Searle & Company of Chicago, Ill.

In cooperation with G. D. Searle & Company, Capital Airlines and United Air Lines initiated extensive testing with dramamine to determine its effectiveness and possible side effects. Recently, in a scientific exhibit before the Aero Medical Association meeting in Denver, Col., three of the men responsible for these tests—Dr. Ludwig G. Lederer, medical director of Capital Airlines, Dr. George J. Kidera, medical director of United Airlines and Col. A. D. Tuttle, former medical director for United, made known their findings:

• **Dramamine provides complete relief** from airsickness in about 60% of all cases and considerable improvement in another 25% of the remaining cases.

No Effects

• **Except for slight drowsiness,** dramamine leaves no side effects and even this symptom has been minimized by changing to a 50 milligram dosage instead of the original 100 mg.

• **Women are much more susceptible** to airsickness than men; men are more susceptible than children.

• **Seat location** in the airplane has a very tangible effect on airsickness tendency. In the Douglas DC-3, persons in the left side window seats proved to be more susceptible than those in the center or right side row.

• **About 1.16% of all passengers** suffer some type of discomfort ranging from minor colds, temporary deafness and earaches, to aggravated airsickness.

The fact that women are much more susceptible than men to airsickness is clearly established in a month-by-month report which covered 1,120,977 passengers on Capital Airlines over the period of one full year. Monthly averages show that airsickness among the men carried accounted for from 15.52% of all cases recorded to 31.30%, with a yearly average of 23.70%.

Women Susceptible

Contrast this with the experience of women passengers: The women accounted for 59.19% of airsickness cases in the course of the year with the range very small from month to month—54.82% in the best month and 62.60% in the worst month. Airsickness among children accounted for only 17.06% of the total during the test period.

It has been suggested that this wide variation in susceptibility to airsickness is directly related to the environment of the different groups. The child, never knowing a quiet moment, is not bothered by the motion of the aircraft. The average man is very active, used to travel and constantly subjected to physical effects of motion.

The women, who medical men consider lead a relatively sheltered life, display more pronounced reactions to stimuli that may be routine to men and children.

The effect of seat location on susceptibility to airsickness is interesting (see chart). Popular opinion holds that those in the rear of the plane, on a long fulcrum, are subjected to more motion and are more apt to suffer discomfort. The survey, covering more than 5,000 airsick passengers, contradicts this thinking. There appears to be no consistency whatsoever between sickness and fore and aft location of the passenger within the cabin.

On the other hand there is a prominent relationship in the plane used, the Douglas DC-3, between the left, center and right rows of seats. Those in the left window row of seats consistently show a higher percentage of cases of airsickness.

Every left-row seat, regardless of position along the length of the plane, shows higher frequency of airsickness among the passengers than any other seat although seats 14 and 17 adjacent to the wing trailing edge are the chief offenders. Note that in row six, 8% of left-seat passengers were airsick, only 4.5% of those in the center row and 4.1% of those in the right row.

All of the figures on passengers carried, age, sex, seating position, etc., were obtained from the regular stewardess reporting form which provides space for this type entries. The record of Capital Airlines' supplementary study showed that 52% of the stewardesses felt dramamine was better than any other treatment for airsickness, another 37% felt it was as good as any other, while only 2% did not feel it equal to other treatments.

Ratio Constant

Dramamine gave complete relief to 57.3% of all 505 study cases at Capital Airlines and to 62% of all 2,129 cases experienced by United Air Lines. While the ratio of complete to partial to no relief experienced by use of dramamine remains quite constant between the various tests conducted, another point is of particular interest:

Capital Airlines used only 50 milligrams of dramamine per dose while United used 100 milligrams. These tests showed that the end results obtained with the smaller dose were almost equal to that of the 100 milligram dose, yet the lighter dose minimized the tendency toward drowsiness otherwise experienced. For this reason, the 50 milligram tablet has been adopted as stand-

ard. It might be noted that only a small cross section of passengers, about 3%, were affected by drowsiness after treatment with dramamine.

In the same manner in which children have proved to be the least susceptible to airsickness a larger percentage of them have also proved to obtain complete relief from its symptoms when treated with the new drug, although neither age nor sex appeared to have any major influence on the ability of dramamine to relieve discomfort.

Thus the range of those obtaining complete relief from sickness with varying age was from 64% in the age group from 5-10 years to 57% for those over 60 years. Similarly 62% of the women experienced complete relief as contrasted with 63% of the men.

Dramamine is also favorable for use in treating airsick passengers because of its ability to prevent as well as cure airsickness and to do so in a very short period of time.

Thus passengers who inform the stewardess of a susceptibility to airsickness can often be saved from discomfort by taking dramamine prior to the start of the flight. Even more preferable would be the administration of dramamine shortly before the flight.

Since some 68% of the airsick passengers treated with the 50-milligram tablet of dramamine found complete relief within 15 minutes, and another 27% found their condition improved within 30 minutes, it is evident that the corrective action occurs fast enough to be of benefit even on the shortest of flights.

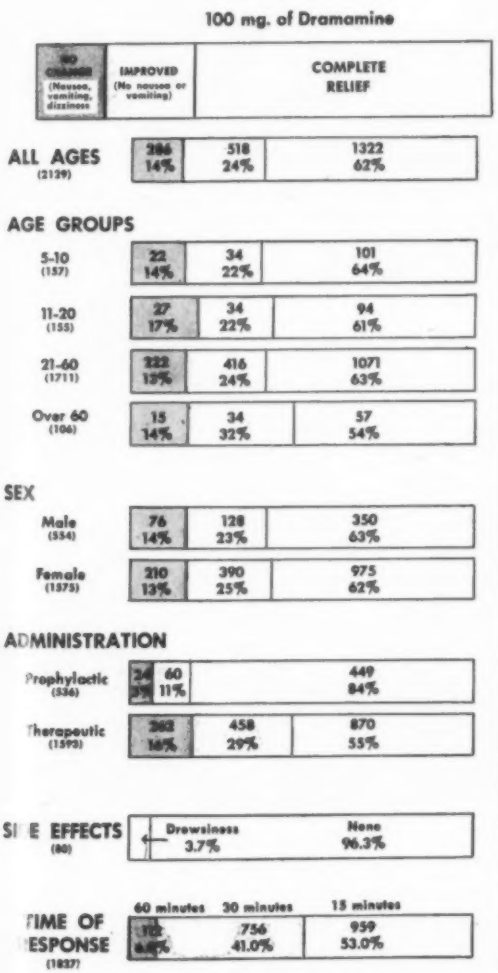
These factors all add up to one thing: Dramamine is an effective preventative and cure for airsickness. While women are much more apt to become sick than men or children, dramamine is about equally effective in combatting the discomforts of airsickness among both groups, regardless of age.

Army, USAF Looking for Tank-Lifting Helicopter

The military services are now considering development of what will be the world's largest helicopter, a king-size rotary-wing craft capable of lifting a 28,000 pound payload, which corresponds to the weight of an Army medium tank.

Currently, both the Army and the USAF's Tactical Air Command have the idea under advisement.

Hughes Aircraft Co. now has under development a similar project, the jet-propelled XH-17, which is simply a "flying crane." To lift the 28,000-pound load, the new 'copter would almost have to be jet-powered also, so there would appear to be an overlap of development. However, the XH-17, now virtually complete, has a very limited range (about 50 miles) and the services want 350-500 miles.



ALTHOUGH CONDUCTED SEPARATELY, studies by both United (left), and Capital (right), show substantial agreement in relative susceptibility of males and females, and in total results of Dramamine treatment.

Corsairs Fly 82% of Navy-Marine Support Sorties
Taking up where they left off in World War II, rugged, hard-hitting Corsair fighter-bomber planes built by Chance Vought Aircraft have accounted for 82 per cent
sorties flown by N
targets in K
l close air support
arine pilots against

VOUGHT CORSAIRS flew 13,120 of a total of 16,000 close air support sorties made in the first 11 months of the Korean War by Navy and Marine Corps pilots. This further underlines the soundness of design which still makes the F4U Corsair one of the world's finest fighter-bombers after 11 years of service.

Chance Vought Aircraft • DALLAS, TEXAS

ONE OF THE FOUR DIVISIONS OF UNITED AIRCRAFT CORPORATION

Between The Lines

By James J. Haggerty, Jr.

THERE were two departures in the last fortnight from the top Navy command—one which caused great sorrow throughout the service and another which caused no grief at all. The former was the death of the Chief of Naval Operations, Adm. Forrest P. Sherman; the latter the resignation of Francis P. Matthews, the Omaha Boy Scout director who became Secretary of the Navy.

Sherman was looked upon with a quizzical eyebrow by many a Navy man when he was appointed CNO following the ouster of Adm. Louis Denfeld after the big 1949 Navy rebellion in the B-36 hearings. Since the President jumped over nine of Sherman's senior officers in appointing him it was felt that he would be a "party-liner," a political chief following the Administration policies and subordinating the true interests of the Navy. But Sherman soon dispelled any such notions. He proved himself a tactful diplomat, well able to hold his own on the Joint Chiefs of Staff. He smoothed out a lot of the Navy's interservice squabbles, promoted better relations with the Navy's old enemy, the Air Force, but never lost sight of the Navy's interests while doing it.

Matthews, on the other hand, will not be very sorely missed, to make an understatement. He is leaving the Navy to take the Ambassadorship to Ireland. Matthews said he was leaving the Navy with reluctance, but having talked with a number of the Navy officers who worked under him during his two-year tenure, we are sure that the reluctance is not shared by the rank and file. He first incurred the contempt of Navy officers when he aligned himself not with, but against the Navy during 1949's bitter unification controversy and went down the line with Louis Johnson's economy policy which proved to be very wrong in light of later developments.

The naming of Dan A. Kimball as the new Secretary was greeted with as much enthusiasm in Navy and in aviation circles as was Matthews' resignation.

Effect on AF?

THE two top level Navy departures brought on some sidelight speculation, namely what effect will they have on the Air Force's drive to expand beyond 95 wings? Both Sherman and Matthews were members of the Armed Services Policy Council, the top governing body which determines the strength and structure of the Defense Department and which will have the final say on Air Force expansion. (The ASPC is composed of the Secretary of Defense, the three service secretaries and the Joint Chiefs of Staff.)

Some observers felt that Kimball and the new CNO, whoever he might be, might oppose the USAF program, whereas Sherman and Matthews were understood to have been willing to go along with it. This might be particularly true if the new CNO were Adm. Arthur W. Radford, leader of the 1949 Navy rebellion, whose opposition to Air Force policies in general is well known, or another air admiral, since aviation has always been the major bone of contention between the two services.

But consensus is that the USAF expansion will pass without opposition. Secretary Marshall hinted at this recently in a press conference when he said that he expects no complication "unless it is stirred up in the press." The plan is apparently to expand the Army and the Navy, particularly Naval aviation, along with the Air Force, although on a lesser scale. Such a program will probably win the compromise support of Army and Navy Council members. In addition, the Administration, led by the President, Acheson and Eisenhower, is solidly behind Air Force expansion, and it is not likely that new Council members will openly buck an Administration determination.

Emphasis on Strategic

ON THE subject of USAF expansion, one of the interesting questions has been where will the expansion be if a 150-wing or some near-by size Air Force is approved? Will it be in tactical, or ground support, air power, or will it be in the long range bombing or air defense forces?

It has generally been assumed that the increase will come in tactical air power, since the major selling point for USAF expansion is the critical need for tactical aviation to back up the ground forces in Europe.

Surprisingly, though, there are indications that the major emphasis will be in strategic, or long range bombing, air power. One such indication is the recent Capitol Hill speech of Sen. Henry Cabot Lodge, in which he called for a 150-wing Air Force. The Air Force, of course, disclaims all responsibility for Lodge's remarks, but it is well known that he has been conferring with USAF officials and logically the figures he presented must have come from Air Force sources.

Lodge's 150-wing structure would be broken down like this: 50 tactical wings, 38 air defense wings and 62 strategic bombing wings. It is reasonable to assume that this structure is at least one of the plans the USAF is considering.

The Air Force will not release any official figures as to how this compares with the 95-wing structure now abuilding, but reliable information is that the 95-wing force will have roughly 40 strategic, 35 tactical and 20 air defense wings.

Thus, Lodge's program, which we are presuming also to be the USAF program, envisions the addition of more than 20 strategic wings, 18 air defense wings and 15 tactical wings; tactical air is subordinated despite the fact that the major reason for the build-up is increased need for air support of troops in Europe. This is partially explained by the fact that the major portion of the new air defense wings will probably be for European, not continental U. S., air defense. These planes could conceivably double as tactical fighters. But Lodge's remarks indicate that the bomber generals have not yet gone out of power, despite incessant demands by the Army for more tactical air.

Industry Personnel

Pratt & Whitney Aircraft Division, United Aircraft Corp., has named **Edward P. Bullard, III** manager of its new branch plant at North Haven, Conn. . . . **Hans E. Lasker** has been appointed works manager and **Frank A. Bandholtz, Jr.** chief cost accountant for Kaman Aircraft Corp. . . . **Norman T. Shaw** has been chosen executive advisor to the chief of material for Ryan Aeronautical Co. and **R. F. Dempsey** has been selected general supervisor . . . **John M. Rogers,** former vice president of Douglas Aircraft Co., has joined Marquardt Aircraft Co. as assistant to the president.

James Allen, special assistant to the administrator of the Reconstruction Finance Corp., has been elected a director of The Glenn L. Martin Co. . . . **Thomas C. Coyne** has been appointed

Coyne Allen

vice president of Curtiss-Wright Corp. in charge of scheduling, planning and production control . . . Flexible Tubing Corp. has picked **Leo Martin** as machine design engineer and **James W. Hull** as chief of the chemical laboratory and development section . . . **John C. Buckwalter** has been selected chief engineer of Douglas Aircraft Co.'s Long Beach Division.

Gordon Yarber has been appointed staff engineer on the Hytrol braking system manufactured by Hydro-Aire, Inc. . . . Boeing Airplane Co. has named **Al Soderquist** administrative engineer, **George Schairer** chief of technical staff and **George Martin** chief project engineer for aircraft . . . **George H. Buchner** has joined Northrop Aircraft, Inc. as manager of spare parts administration . . .

Fairchild Aircraft Division has picked **Orrin A. Berthiaume** as assistant general manager . . . Fairchild's former chief engineer, **Armand J. Thieblot,** has formed his own aircraft engineering company in Washington to design structural components . . .

General Electric Co. has appointed **H. L. Disco** manager of the jet engine parts division of its major appliance department . . . **H. L. Hulse** has been named manager of the components division of GE's electronics department . . . **Walter V. Scholz** has been selected technical representative for the hydraulics section of the industrial aviation division, R. M. Hollingshead Corp., Camden, N. J. . . . Bendix Radio Division, Bendix Aviation Corp., has chosen **Clifford J. Cosgrove** assistant manager of subcontracting.

Production Spotlight

Lion's Share: Aircraft Industries Association has taken exception to the report of the Senate Select Small Business Committee which was critical of the fact that 50 large firms, including a number in the aircraft industry, "command almost two-thirds of the dollar volume of defense contracts." The report made no mention of the extent to which these major contractors dole out that dollar volume in the form of contracts to subcontractors and suppliers.

In a letter to the committee's chairman, Sen. John J. Sparkman (D., Ala.), AIA president Adm. DeWitt C. Ramsey pointed out that a detailed report of subcontracting and supplying in the aircraft industry was made available to the committee but that this information never found its way into the committee report. Ramsey reiterated the major point contained in AIA's report: that although a comparatively small number of companies have the *prime* contracts in the defense program, the dollar values of these primes are not indicative of the companies' backlogs, since they do only a portion of the work in their own plants. In the aircraft industry, Ramsey said, approximately 50% of the total dollar volume of orders received by prime contractors is spent with outside firms. Of the other half, about 60% goes to small businesses (by definition, those who employ fewer than 500 persons). The aircraft industry now has more than 60,000 subcontractors and suppliers and 87% of them are small businesses.

New F-84: Republic Aviation Corp. has developed a new RF-84F, reconnaissance version of the swept-wing F-84F. Plane is powered by a Wright YJ-65 Sapphire. Republic has received a contract for a substantial quantity of RF's including tools and spare parts.

Expansion Notes: Stratos Division of Fairchild Engine and Airplane Corp. has started construction work on its new $2,000,000 plant at Bay Shore, L .I. The plant will have 140,000 square feet of floor space and will be used for production of aircraft refrigeration and pressurization units and other accessories . . . Republic Aviation Corp. will spend $1,500,000 on expansion of its Farmingdale, L. I., plant. The program has three main projects: the roofing-in and build-up of a 40,000 square foot area between the parts plant and tool shop wings, the installation of a static test laboratory and modification of a hangar to accommodate foundry equipment . . . Douglas Aircraft Co. is building a new electronics building at its Tulsa, Okla., plant to be used in connection with inspection and final check out of the Boeing B-47 jet bombers Douglas will build there . . . North American Aviation is negotiating for another manufacturing building containing 99,600 square feet at its Los Angeles plant . . . Boeing Airplane Co. is moving four departments from its Seattle Plant 2 to the Renton, Wash., plant to provide added space for work on the B-52 jet bomber project. With the removal of these four departments from Seattle, all C-97 and B-50 assembly will be done at Renton.

World War II Peak: Consolidated Vultee Aircraft Corp.'s Fort Worth plant is approaching its war-time peak of 30,609 employes (November, 1943). The division has now topped the 30,000 mark. The plant has 4,600, or 15.4%, women employees.

K-F at Dowagiac: Kaiser-Frazer Corp.'s Engine Division expects to employ about 800 workers at the Dowagiac, Mich., plant now being tooled up to produce parts for the Wright R-1300 engine K-F will build at Detroit. The Dowagiac plant will be equipped to perform about 47% of the machining operations required on the project. Production of the 800-horsepower radial engines, which are used on the USAF's North American T-28 trainer, is scheduled to start at Detroit in January.

Crash Helmets: Wright Aeronautical Corp.'s former 5,000 square-foot plant in Patterson, N. J., has been leased by Apparel Aids, Inc., New York manufacturer of crash helmets for jet pilots and other Air Force safety equipment.

Sells ManufacturingStock: National Aviation Corp., aviation investment firm, has decreased its holdings in all but two manufacturing firms—Boeing and Douglas—while increasing its airline investments. A comparison with the previous year-end shows that aircraft and accessory stocks declined from 59.2% of the NAC portfolio to 35.7%; and airline shares went up from 31.5% to 52.9%. Remainder of the portfolio, consisting of cash, securities and receivables, increased from 9.3% to 11.4%.

J.J.H.

Ever wonder who keeps the controls under control?

You'll find the answer in the scene below—a scene that's familiar wherever our Air Forces fly. Honeywell maintains 42 Aeronautical Service Engineers in the field to see that Honeywell Autopilots and other vital equipment keep their "factory-fresh" efficiency.

Each of these Honeywell men is a skilled teacher, capable of passing his knowledge on to Air Force technicians. And each has the special ability it takes to evaluate the composite effect on equipment of such local operating conditions as extreme heat, cold, humidity, dust, sand and moisture. Their observations are then passed on to Honeywell's engineering staff for use in improving the operation of Honeywell Controls.

This is just one phase of Honeywell's "follow-up" program which begins in Honeywell's research laboratories, continues into aircraft plants where controls are engineered individually to each airplane model, goes on through flight-testing, ends only when the equipment is obsolete.

We expect this job of "keeping the controls under control" to grow larger in future years. Because automatic control is so important a part of aviation progress. And automatic control is Honeywell's business.

AERONAUTICAL DIVISION
Minneapolis-Honeywell
Minneapolis 13, Minn.

MINNEAPOLIS **Honeywell**

Aeronautical Controls

On the commercial side PAC is a

20,000th time over the Line

● In its 23 years of service to the Americas, Panagra has won many s. And now still another is pinned on a Panagra . When this Panagra flight crossed the Equator on July 26, it was the 20,000th time over the big for Panagra. Twice a day, PAA GRACE DC-6's cross the line going to and from the U. S. A. and Buenos Aires. From the , it's actually 500 miles less to the home of via *El InterAmericano's* route from Miami* to Panama, Guayaquil, Lima, Santiago, Buenos Aires. Red Carpet Service includes Gourmet Galley meals, bed-sized berths, Fiesta Lounge, and s. In the U.S.A., Pan American World Airways is sales agent for

PAN AMERICAN-GRACE AIRWAYS

*Miami to Panama over the routes of Pan American World Airways.

London Letter

By Richard G. Worcester

THE British Air Ministry has announced that a replacement for the Hastings transport (the RAF equivalent to the C-54) is under consideration and is expected to be a four-engined jet. Assuming that a pure jet aircraft is contemplated (and not a prop-jet), it may later be found that this type lacks the versatility and flexibility which the RAF needs.

The most suitable type of aircraft would be something like a 130,000 lb. four-Centaurus aircraft with tail doors for parachuting supplies. The British Army has wanted the 105,000 lb. Blackburn-General Universal freighter.

There is also a need for a replacement of the Vickers Valetta, which roughly corresponds to the C-47. The Bristol 170 Freighter has been mentioned, but it has nose doors. The larger freight-carrying version of the Airspeed Ambassador has also been suggested for military use, and various design layouts have been drafted with tail-doors. But all these suggested types seem to have been put aside, and there are now rumors that the RAF may buy Nord 2501's made by the French. This airplane, weighing 43,000 lbs. and with Two Bristol Hercules engines, has the same twin-boom arrangement as the Fairchild C-119.

●

Although the Handley Page Hermes has been giving BOAC a good deal of trouble, the manufacturers in their annual report made a telling point that the 86,000 lb. transport was not once grounded in its critical early days. This parallels Boeing's achievement with the Stratocruiser. BOAC says the reason it is selling some of its Hermes fleet (about $1,000,000 each has been mentioned) is that it has confidence in the Ghost-Comet's adequacy for present traffic in Africa.

●

The Rolls-Royce Avon, at present conservatively rated at 6,500 lbs. static, is the key British jet in the rearmament drive. Rolls-Royce in England and in another plant in Scotland, D. Napier, famed aero-engine makers, and the Bristol Aeroplane Company are all busy with the engine. The auto-maker Standard Motors has not yet decided whether it can handle the assignment. If the RAF orders 1,300 Avons the cost would run to $60,000,000.

●

That $750,000 Birdsboro press at Lockheed has Europeans rubbing their eyes. This sum of money is about half the entire working capital of each of at least three of the principal manufacturers. The enormous cost of these big tools hits the small industries and the small companies. Vickers-Armstrongs—one of the largest of course—is putting in its first skin-rolling machine for tapered plates and it should be in action later this year. Armstrong Whitworth has bought a Model 50 Hufford stitch-wrap former from California which is already being used.

●

It seems to be generally agreed that the easiest class of missile to build is the defensive type. Missiles become more complex when made to be used offensively in tactical operations and they are an inextricable maze of electronics involving a labyrinth of mathematics when used for strategic offense. If the Convair Terrier is the most advanced type, it would seem the U. S., having mastered the defensive type has reached a point somewhere close to phase two, or the tactical application. Britain is probably in the first stage.

But whereas the urgent U. S. requirement is for a strategic missile, there is nothing yet to suggest that Western Europe need be concerned with them, any more than with strategic manned aircraft. Strategic attack, by common consent, is left to the U. S. while Britain leads a tactical force in Europe. So, following the same argument, Britain's long-term aim is a tactical type of rocket. An improved type of V-2 might indeed be the limit of British requirements. But of course there must be the highest priority for defensive missiles—particularly as fighters in combat seem to be increasingly ineffective because they are simply becoming too fast for each other.

PACIFIC AIRMOTIVE'S president, Tom Wolfe (seated), is shown conferring with Luther (Luke) Harris, vice president of production. Both have backgrounds of many years of airline experience.

PAC's One-Stop Service Idea Pays Off

Package overhaul deals, manufacturing division, will push this year's business over $20 million.

TOM WOLFE's one-stop service idea is paying off.

When the former airline executive moved into the presidency of Pacific Airmotive Corp. at Burbank, Calif., in July, 1950, PAC's last annual report (for 1949) showed a net worth of exactly $18,744. The following year the company made a profit of more than $500,000.

Korean war contracts have helped, of course, but Wolfe injected new ideas and streamlined the company. This year PAC will do more than $20 million in business.

In addition to its main plant at Burbank PAC has a well equipped base at Linden, N. J., and branches at Oakland, Seattle and Kansas City. It is the only commercial service aside from airlines equipped to overhaul P & W R-43.0 engines.

Here is how Wolfe has moved PAC into the ranks of big (and profitable) business:

1. **PAC's business volume** had been predominantly commercial. Now the ratio is 50-50 with military, providing a healthy balance. Wolfe acquired the old Cal-Aero airfield near Chino, Calif., and went into military airframe overhaul in a big way.

2. **He hired Luther (Luke) Harris,** whose name has been synonymous with aircraft overhaul and repair for thirty years, and made him general production manager. (Harris was recently made a vice president of the company.)

3. **He established what he calls the "one stop" service idea.** Whether the customer is a small airline, a corporate aircraft owner or other type of airplane owner, PAC can offer a package deal of airframe and engine overhaul, parts, and accessories.

Overhead Cut 43%

4. **He cut overhead by 43%,** reducing it from 16.2% of PAC's total cost of doing business to 9.2%. At the same time improved production line efficiency was being introduced into the shops by Luke Harris. The company now has 2,469 employes, up from 1,084 a year ago. Last year's sales were $13,521,431 and will top $20 million this year with an expected earning figure of $750,000.

Most of PAC's current airframe overhaul is military, the largest job being progressive maintenance of MATS C-54's at the Chino base. It has enough business overhauling R-2800 engines for the Air Force to keep the Burbank base busy until well into 1952.

On the commercial side PAC is a pioneer in "lease-power" which is another name for the fixed charge for engine overhaul based on hours of service. It has contracts of this type with such carriers as The Flying Tigers, California Eastern Airways and Pacific Northern Airlines.

Big thing about lease-power to the operator is that it gives him a definite basis for estimating what his engine overhauls are going to cost. He also is spared such office problems as making material purchases, storing of parts, and keeping accounts. Operators having these contracts know they will get their engines back in 30 days—this is stipulated in the contracts.

One of PAC's satisfied customers is The Flying Tigers. Al Goldberg, supt. of maintenance, reports that in June the Tigers flew 33 trips across the Pacific in the Korean airlift with five C-54's at approximately 75 hours per trip. With this unusually high utilization, the Tigers experienced only three engine failures.

PAC's total parts inventory for all phases of overhaul and repair is in excess of $5,000,000. With a monthly business of about $450,000, an inventory of three times this amount is required for the engine shop alone.

180 a Month

The engine shop is capable of handling 180 engines a month and is currently at capacity. There are also fully equipped propeller, accessory, and instrument shops.

But overhaul is by no means PAC's only business. It has a manufacturing division which was started several years ago when it couldn't find a hydraulic pump test bench on the commercial market and solved the problem by designing and building its own. Now it makes test equipment and maintenance tools which can be found in almost every major maintenance base in this country and abroad.

Dick Maystead, who joined PAC as a draftsman ten years ago, is v.p. in charge of manufacturing and has 29 engineers on his staff. Production is current on cabin and cockpit pressure regulators, an extensive line of flow control valves, true mass flow valves and other types of valves.

PAC is a distributor for several top aeronautical lines, including Pratt & Whitney, Hamilton Standard, Bendix Scintilla, Bendix Eclipse, Eclipse Pioneer, B. F. Goodrich, Cee Bee Chemical, B. G. Sparkplugs, Champion Sparkplugs, Exide batteries and MacWhyte cables.

Long range planning has become a vital part of the operations. The company is on an ordering cycle of eight

TWA PAC OFFICIALS, George Sisley (left) production manager, and Dick Maystead, vice president-manufacturing, inspect cabin safety valves, one of more than 200 items produced by company's growing manufacturing division.

to twelve months and in some instances is charting for 1953, as, for example, the CB-16 engines now going into Douglas DC-6A's and B's.

Besides Wolfe, Harris and Maystead, others in the top brackets are C. O. Cornette, v.p.-finance; Bruce Atwater, v.p. of the eastern division; Thomas McCraney, secretary; W. S. Laughlin, general sales manager; Harry Wilmarth, export sales mgr.; Jack Waskey, manager of the engine division; Chester Kiesling, manager of commercial airframe overhaul and maintenance; Less Littrell, manager of military airframe overhaul; and Jim Bishop, manager of the Chino division.

CAA Airworthiness Directives

Franklin 6A4-165-B3 engines serially numbered 33046 and below, according to a revision of A. D. Note 51-15-2 specifies that crankcases found free of cracks must be inspected at 250-hour intervals. Crankcases with surface indications, hairline cracks, or small wall cracks and cracks starting at main bearing stud hold may be operated further at the option of the owner and shall be inspected every 50 hours thereafter. Crankcases found cracked or fractured to the extent that they enter the main bearing supports (usually from back near main bearing stud hold and drilled oil hole, indicate a complete brake soon. These crankcases should be replaced with reinforced crankcase assembly P/N 18925 after which no inspection is required.

Bellanca, all models 14-19 aircraft serial nos. 2002 through 2075, are required within the next 25 hours of operation and not later than August 1, 1951 to modify the trim tab attachment to the elevator, according to directive 51-16-2 and Bellanca Service Bulletin No. 2.

Extra Section

By William D. Perreault

WE'VE often noticed signs in the reception rooms of manufacturers and airlines noting the days and hours on which sales representatives are allowed to consult with engineering-maintenance-purchasing people. At United Air Lines' base in San Francisco we were impressed by a good-sized sign prominently located outside one building:

Sales Representatives
Welcome at All Times!

•

An interesting piece of equipment found at American Airlines' overhaul base in Tulsa, and probably at no other airline in the world, is a large lumber conveyor as used in virtually all large lumber yards. This strange-looking vehicle, with its driver's cab mounted on four 10-foot legs which each carry 36 inch wheels, was picked by AA's Ray Miller to transport complete power eggs from point to point around the base. The operator simply drives the carrier over the power egg, stand and all. The long legs straddle the stand while power-operated jaws move in to clamp the stand in place. Another control lifts the engine clear off the ground. In less than a minute the unit is en route.

•

Changing nature of the air freight business is indicated by Slick Airways' experience. Originally freight loads were made up of a few highly specialized products and most of the business came from a small number of progressive shippers. A recent Slick study showed that the biggest customer today, General Motors with all its divisions, represents only 7% of the business. The next largest is only 3% and it breaks down rapidly below this level.

•

One thing evident at all the airline bases is the effect of last winter's welcome but unseasonal passenger traffic records. Aircraft utilization remained high during the period when most shops get their annual chance to catch up on the summer backlog of instrument and accessory overhaul work. This year finds these shops working at peak loads with employment up and some overtime being used. It also aggravates the parts problem. Parts supplies which would normally have handled requirements were used up in short order and delayed deliveries further aggravate the problem.

•

Everyone seems to find cost figures of interest. At United Air Lines we found the cost of cleaning fluids used in engine overhaul in this category. United's cleaning tanks in the big automatic washer cost $35,000 to recharge. United finds that this item, applied to engine overhaul costs, means a cost of $6 per engine for cleaning chemicals alone. The industry total for engine-cleaning chemicals must be an impressive figure.

•

An interesting story lies behind the development of the capacitance type altitude controller by Minneapolis-Honeywell (see story on page 19). M-H had worked out a more conventional controller and was attempting to test it out. Normally testing for accuracy requires an instrument about ten times as accurate as the product under test. The engineer assigned the task of developing a suitable test instrument came up with such a sound design that Minneapolis-Honeywell abandoned the original unit and refined the test instrument for regular flight applications.

•

Airport and terrain conditions at Lockheed Air Terminal in Burbank are such that it's not practical to fly jet planes out of this field. Result is that Lockheed Aircraft Service, which is overhauling and modifying large numbers of F-80's for the U. S. Air Force, ships the completed plane via truck to San Fernando Airport in Van Nuys for test and dispatching. The complete aircraft is loaded on a flat-bed truck, the highways cleared and the transfer completed.

Survey Group Warns U. S. to Act Fast on Jets

Government-sponsored turbine transport developments in European countries, such as the $400 million government-backed British program, show signs of cutting into the foreign market for U. S. built aircraft and helicopters, according to the European Survey Group of the Prototype Aircraft Advisory Committee.

Reporting on its month-long tour of European countries, the ESG noted that there appears to be no turbine-powered aircraft available at this time which in the near future might be able to provide non-stop New York-London or New York-Paris airline service, but the group felt that during 1952 the U. S. international operators will begin to feel the effects of the British lead in the turbine transport field.

This lead, estimated at 3-5 years, is the factor which may well determine future transport sales by U. S. manufacturers to European countries. The survey group warned the Prototype Committee that while the Swiss, Scandinavians and Dutch favor U. S. aircraft, this is dependent on technical superiority, and such factors as national prestige and currency aspects of transport purchases may alter this status.

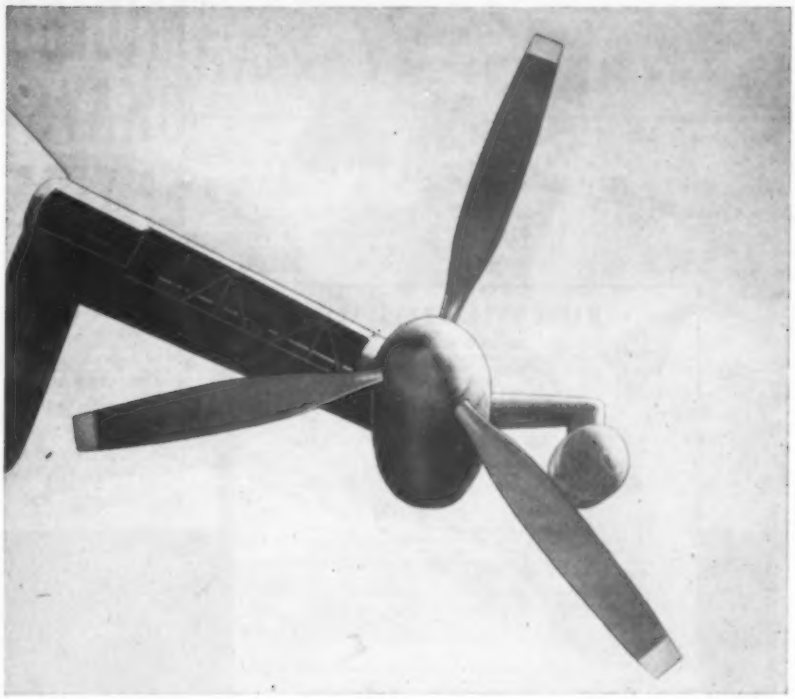
Not only is the U. S. losing ground in the transport field by its failure to develop a turbine transport, but also in allied fields. The British and French, who are now using American built helicopters, are making rapid progress with their own designs. U. S. feeder airline type aircraft proposals exceed the needs of foreign operators and consequently may be ruled out. Even in the conventional transport field, the French have a double-deck passenger-freighter design, the Breguet 76-3, which is in production and shows possibilities in cargo operations, particularly in undeveloped countries.

Concluded the European Survey Group: "The U. S. may not have lost an irretrievable amount of competitive position on turbine-powered transports by delaying until this time if immediate steps are taken:

(1) **The U. S. should promptly** get under way on the testing of available turbine powered aircraft to obtain design, operating, airway and airport data.

(2) **Means should be established** within the U. S. to permit the immediate and rapid development of new types of civil transport aircraft.

(3) **The Technical Subcommittees'** tentative specifications are sound; however the range of the jet transport should be increased.



THE "ZEP-PROP," shown above, is a new 18-foot diameter propeller designed for the Navy's Goodyear ZPN blimp by Curtiss-Wright. With the "Zep-prop" the ZPN, world's largest blimp, will be able to have normal forward speeds as well as the ability to hover (without shutting down the engines) and to back up. The electrically operated "Zep-prop" absorbs power from two 800-horsepower Wright Cyclone engines mounted on outriggers. The ZPN has 875,000 cubic feet helium capacity and an 83-foot long, two-deck control car. It recently started flight tests.

Technical Literature

AUTOMATIC CONTROLS: A 32-page engineering manual covering its line of Hi-G automatic controls for use in guided missiles, rockets, jet and piston engines has been published by General Controls Company, Glendale, Calif.

NON-INFLAMMABLE HYDRAULIC FLUID: A 16-page illustrated booklet on Hollingshead H-2 non-inflammable hydraulic fluid is being circulated by R. M. Hollingshead Corp., 850 Cooper St., Camden 2, N. J.

MARMAN CLAMPS: A series of data sheets on Marman clamps for aircraft applications are being provided to engineers and other interested groups by Marman Products Co., Inc., 940 W. Florence Ave., Inglewood, Calif. Sheets are numbered as part of an Engineer's Handbook and each is punched for filing.

MICRO SWITCHES: A four-page illustrated brochure providing photos and operating data on more than 12 major types of Micro Switches is available from Micro Switch, Freeport, Illinois. Bulletin 54.

SOLDERLESS CONNECTORS: Bulletin 750 available from Buchanan Electrical Products Corp., Hillside, N. J. describes the company's improved line of Underwriters' approved "pres-SURE connectors" for solderless splicing and terminating of electrical wires.

LANDING AND TAKE-OFF: A 25-page illustrated presentation entitled "The Ground Run of Aircraft in Landing and Take-Off," Garbell Aeronautical Series No. 3, has been prepared by Garbell Research Foundation and is available "for the cost of printing and postage"—$1. Covers a fast and accurate method of solving ground-run problems without use of log and trig tables. Garbell Research Foundation, 1714 Lake St., San Francisco 21, Calif.

GRINDING WHEEL BOND: A 4-page folder on "XL" vitrified silicon carbide grinding wheel bond is available from Chicago Wheel & Manufacturing Co., 1101 West Monroe St., Chicago 7, Ill.

METAL IDENTIFICATION MARKING: This is the title of a new two-color leaflet covering parts identification, embossing, engraving and serializing of metal surfaces. Available from The Roberts Numbering Machine Co., 700 Jamaica Ave., Brooklyn 8, N. Y.

FLUSH LATCHES: An illustrated catalog including 28 pages of drawings and detail engineering data on "Flush Latches and Hinges" is available from Hartwell Aviation Supply Co., 9035 Venice Blvd., Los Angeles 34, Calif.

MID-CONTINENT OKAYS JANITROL FOR ENTIRE CONVAIR FLEET

Now is a good time to install Janitrol heating equipment in Convairs, and count on the same performance—"equal to all occasions"—that Mid-Continent obtained last winter. Capt. L. Homer Mouden, one of Mid-Continent's pilots, wrote in his log book: "It is really a comfort and a joy to have heat in the cockpit. This is the best arrangement of our CV-240 fleet . . . and thanks from the pilots." "Thanks to you, Mid-Continent, for this heart-warming testimonial . . . Your nearest Janitrol representative can furnish prompt assistance in planning and making this installation.

MID-CONTINENT AIRLINES

Serving the Heart of America

December 27, 1950

Surface Combustion Corporation
2375 Dorr Street
Toledo 1, Ohio

Gentlemen:

At the time we placed our Convair aircraft in service last Spring, we recognized the problem of inadequate cockpit heat and the need for heating the cabins on the ground; therefore, a decision was made to install "Janitrols", as we considered such an installation to be the most logical solution to our problem.

Since completing the installations in our fleet of Convairs, we have operated in temperatures far below zero, both on the ground and in the air, and have found the Janitrols equal to all occasions. Our Convair cockpits are warm and cabins may be heated to a comfortable temperature before boarding passengers, regardless of outside air temperatures.

In fact, the Janitrols can serve a third purpose in that there is sufficient heat available for both the cabin and cockpit, making it possible to use all heat from the normal source for anti-icing, should such action be desirable.

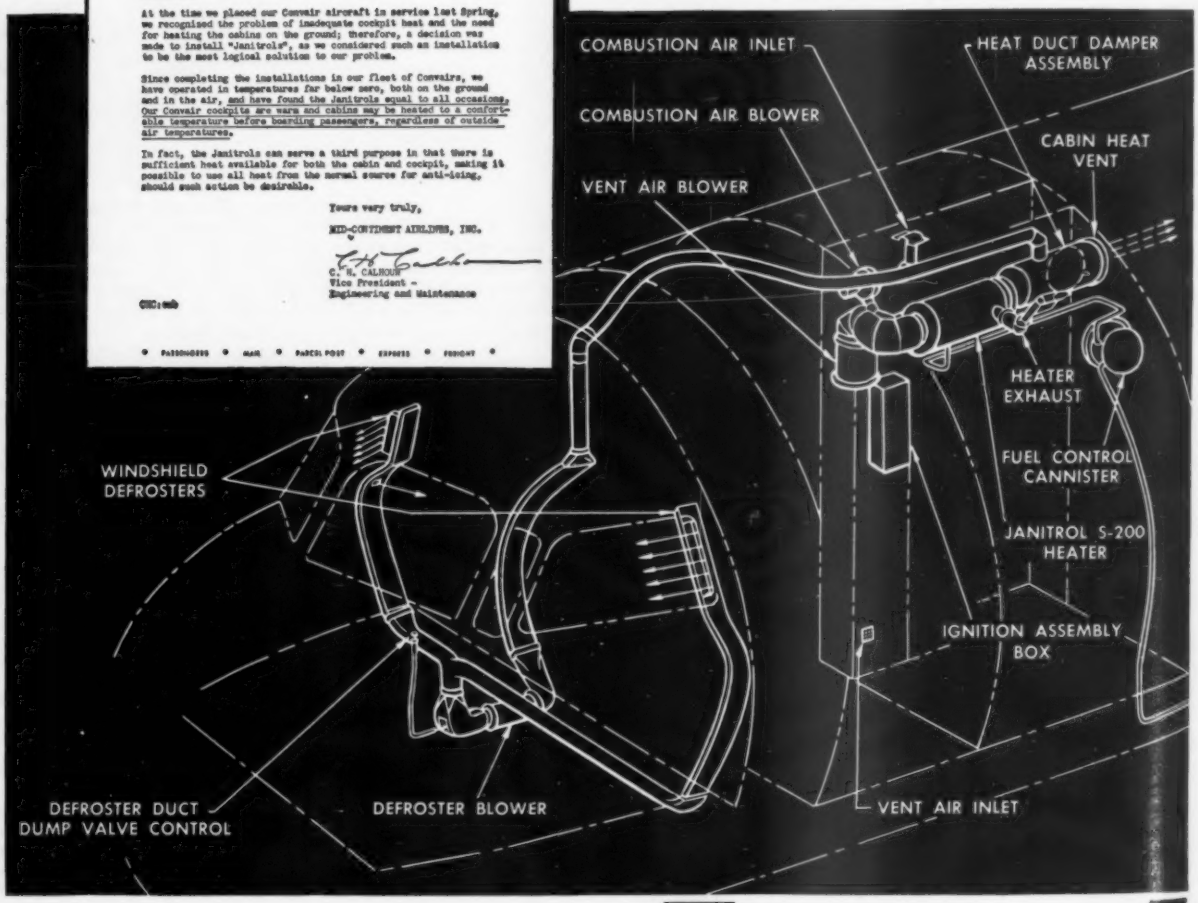
Yours very truly,

MID-CONTINENT AIRLINES, INC.

C. H. CALHOUN
Vice President -
Engineering and Maintenance

CHC:mb

PASSENGERS • MAIL • PARCEL POST • EXPRESS • FREIGHT



AIRCRAFT AND AUTOMOTIVE HEATERS *with the whirling flame* **Janitrol**®

KNOWN THE WORLD ROUND

AIRCRAFT-AUTOMOTIVE DIVISION • SURFACE COMBUSTION CORP., TOLEDO 1, OHIO

F. H. Scott, New York, N.Y., 225 Broadway; C B. Anderson, Kansas City, Mo.; 1438 Dierks Bldg.; Lee Curtin, Hollywood, Calif., 7046 Hollywood Blvd.; F H. Scott, Washington, D.C., 4650 East-West Highway; Frank Deak, Phil Miller, Cen. District Office, Engineering Development & Production, Columbus, O.; Hdqrs., Toledo, O.

Hollingshead Hydraulic Fluid Will Not Burn

In cooperation with the U. S. Navy, the R. M. Hollingshead Corp. of Camden, N. J. has developed a non-inflammable hydraulic fluid which, in addition to meeting the CAA's and Navy's most stringent tests, is compatible with existing hydraulic systems.

Incompatibility of earlier fluids with operational aircraft systems, requiring repacking of all components, special electrical wiring protection, etc., has been the chief drawback to wide scale adoption of such a fluid.

Hollingshead's H-2, a water based fluid, has been undergoing flight tests in Navy aircraft for more than two years and "most Navy planes now flying" are being changed over to the non-inflammable fluid.

Principal components of the Hollingshead fluid are water and ethylene glycol which make up about 85% of its volume. Remainder includes special additives to provide greater lubricity, guard against freezing, prevent corrosion, etc. The H-2 fluid is approved for operation in temperatures ranging from minus 60 degrees Fahrenheit to plus 160 degrees.

6,300 Degrees

In CAA tests, H-2 was sprayed under 3,000 pounds pressure through a 6300-degree Fahrenheit flame, yet did not burn. When subjected to CAA's recently established Hexachlorobutadiene Scale (flammability reference scale) H-2 proved to have a reference number of "0". This contrasts with a number of 72 for 366 base hydraulic fluid, a widely used type, and 80 for aviation gasoline.

As a water based fluid, H-2 is subject to water loss and absorption but long-term tests have shown that this does not adversely affect the fluid's prime properties.

Only hydraulic system component which might be changed with the adoption of H-2, the manufacturer states, is the micronic filters which may use adhesives soluble in water-based fluids. Otherwise the rubber seals, leather back-up rings and associated units require no special adaption.

As an entirely new fluid, Hollingshead points out that H-2 fluid should be handled in accordance with instructions. These instructions and complete data on the development and testing of H-2 are contained in a 16-page booklet entitled "H2" available from R. M. Hollingshead Corp., 850 Cooper St., Camden 2, N. J.

Technical News Digest

• **Frontier Airlines** is modifying its fleet of 18 Douglas DC-3's to increase the number of passenger seats from 21 to 24. This will in part help to accommodate a major increase in traffic now being experienced. In May traffic was up 77% over last year's volume.

• **Douglas Aircraft Company** is programming a change in the cabin air conditioning system of the Douglas DC-6B's, which is expected to increase air flow in the cabin by 27%.

• **A Navy Research scientist, Dr. Herman J. Schaeffer,** has urged that the hazard of solar radiation experienced while flying at high altitude has been greatly exaggerated. Schaeffer claims a pilot would have to spend 15 hours a day for weeks or months at high altitude before being affected by the sun's radioactive rays.

• **Stainless steel flexible manifold connections** for fuel and oil lines on jet engines have been developed by Clifford Manufacturing Company, Waltham, Mass. The stainless steel bellows is covered with metallic braid and welded by atomic hydrogen.

• **The first nine of a series** of instrument approach and landing charts showing standard instrument approach procedures on omni-directional (VOR) landing aids has been released by the Coast and Geodetic Survey. Charts to date cover Oklahoma City, Albuquerque, Daytona Beach, Memphis, Tulsa, Ft. Worth, Little Rock, Brunswick, Maine; and Augusta, Georgia.

• **Provisions of Special CAR SR-346** have been extended until June 30, 1952 or until revised. They provide special operating rules for scheduled air carriers operating in accordance with Part 61 at altitudes in excess of 12,500 feet above sea level east of longitude 100 degrees W and at an altitude in excess of 14,500 feet above SL west of Longitude 100 degrees W in long distance operations, has been extended until June 30, 1952, or until revised.

• **A micro-hardness tester** which is expected to find important applications in the study of properties of high-temperature alloys has been developed by the National Bureau of Standards. Unit is based on diamond-indentation method now used but has been especially designed to make indentations of microscopic depth under very low loads. Discussed in NBS Technical Report 1569.

• **Commander A. E. Wuerker, U. S. Coast Guard,** has been awarded a Coast Guard Commendation Ribbon for his leadership in directing the work of Special Working Group 5 of the Air Coordinating Committee, the group which formulated the comprehensive "Air Traffic Control and National Defense" report which will form the basis of future "common system" developments.

• **ICAO has named CAA's Lake Littlejohn** as senior technical expert in civil aviation in Indonesia under the provisions of the United Nations Expanded Program for Technical Assistance. This is the sixth such appointment by ICAO, others having been made in Iran, Ethiopia, Jordan, Israel and Thailand.

• **A new hot spray finish** for military aircraft, developed by the Hercules Powder Co., is now in use at Douglas Aircraft Company where it is reported that savings of as much as 27½ hours have been experienced in finishing an AD-4 plane. One coat of the new finish can be used where two coats were previously required and this also eliminates a sanding operation.

• **A three-day program** of the American Institute of Electrical Engineers scheduled for October 8-10 at the Hollywood Roosevelt Hotel will be devoted to aircraft electrical applications. Henry F. Rempt, Lockheed Aircraft Corp., is general chairman of the meeting.

• **A new fluid hydroformer,** the first in the world, capable of converting 55 octane virgin gasolines into 98-175 octane aviation gasoline, will be built at Destrehan, La. by The M. W. Kellogg Company of New York City. This plant will be rated at 2,000 barrels a day.

• **United Air Lines** has picked the Sperry A-12 autopilot for its fleet of 40 Convair 340's and Consolidated Vultee Aircraft Corp. has placed the order with Sperry Gyroscope Company. Planes are scheduled for early 1952 delivery.

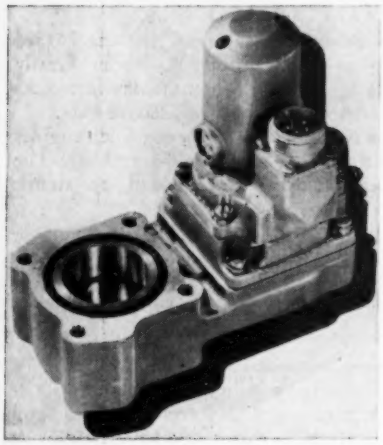
• **A $270,000 jet engine test stand** capable of handling four engines simultaneously is nearing completion at Convair's Fort Worth Division.

• **Truck-bed lift equipment** has been put to use by the Flying Tiger Line at Chicago and Cleveland. Trucks built to the carrier's specifications lift their beds to the floor level of the aircraft, eliminating the need for fork lifts and transloading operations. Loads up to six tons can be handled in this manner.

New Products

Motorized Gate Valve

A new motorized gate valve rated to handle all standard fuels and gases and featuring one-piece body construction has been announced by the General



Controls Company. An addition to the company's Hi-G line, the new AV-16 valve features an actuator assembly which can be removed for replacement or overhaul without disturbing the main valve installation. Four bolts hold the operating assembly in place. Once removed, a manually operated handle can be attached or a motor assembly with an integral manual over-ride providing for complete disconnection between the motor and manual operator. Available in 1-to 4-inch tube sizes and equipped with standard AN-fitting connections. Can be supplied with or without thermal relief valve.

Address: **General Controls Co.,** 801 Allen Ave., Glendale, California.

Torque Driver

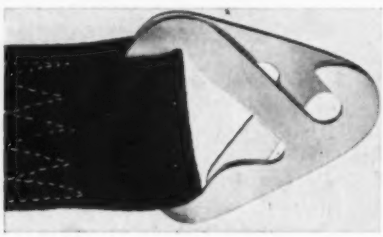
A new torque-indicating driver which automatically measures torque as it drives studs, nuts, screws or other fastners has been placed on the market by True-Circle Products Co. Known as the Garvin Driver, the unit is built around a standard deflection-type torque wrench. Minimum torque is indicated by a green light and max torque by a red light. Both lights are on the same side as the torque scale facing the operator. Can be arranged so that relay interrupts power source and automatically stops rotation at desired torque. Torque setting adjustments are easily made. Made in 0-100, 3-350, 0-500, 0-750, 1-1500 and 0-200 inch-pound capacities for either electric high-cycle or air motors. The 0-100 inch-pound model is portable while the larger units mount on radial drill-press-type arms.

Address: **Tru-Circle Products Co.,** P. O. Box 536, South Bend, Indiana.

Electrical Brush

A new-type brush designed for operation of aircraft motors and generators at high altitudes has been developed by Pure Carbon Co., Inc. The brush features a combination of chemically treated and untreated brushes or sections combined to provide the right amount of film on the commutator or ring at high altitude, without making it necessary to weigh each brush to determine impregnation. Numerous combinations are used but in most cases the brush is made up in a sandwich-type construction with the impregnated section sandwiched between two layers of untreated materials. Amount of film deposited by the brush can be controlled by varying the thickness of the treated section.

Address: **Pure Carbon Co., Inc.,** St. Mary's, Pa.



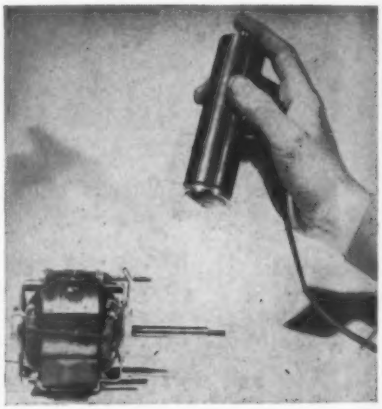
Belt Attachment Hooks

Designed for easy attachment or removal of aircraft seat belts and meeting the new strength requirements of CAA Technical Standard Order C-22 are these low-cost Brown-Line attachment hooks manufactured by Gordon D. Brown & Associates. Each hook is composed of two opposing sections which interlock over the attachment pins. There are no springs or intricate parts. The hooks can be installed from the front of the seat and are easily removed. Once in position, the seat belt webbing locks and hooks in place. Brown-Line hooks are available in sets of four. They are made of heat-treated, cadmium-plated chrome molybdenum steel. Illustrated technical data obtainable on request.

Address: **Gordon D. Brown & Associates,** 407K Commercial Center St., Beverly Hills, Calif.

Stroboscope

A flashlight-type stroboscope, well-suited for production and laboratory testing of synchronous motors, timer switches, timing devices, motors, generators, etc., has been announced by the Synchroscope Co. The unit measures ½ inch in diameter by five inches in length, weighs less than five ounces



and operates like a flashlight with a simple button switch. "The Synchroscope" uses an electronic, cold-cathode triode tube which rectifies the line source and gives a pulse of light only during the positive pattern of AC cycle. The visual pulse per cycle stroboscopically stops the motion of synchronous motor or device operating in synchronism with the line frequency.

Address: **The Synchroscope Co.,** 57 William St., New York 5, N. Y.

Midget Bells

A line of midget bells featuring a new principle in A. C. contactless vibrating bell construction has been announced by Signal Engineering & Manufacturing Co. The bell is an underdome, solenoid and plunger type with only one moving part. There are no contacts. Prolonged vibration of the bell shell, the manufacturer claims, results in greater sound-carrying power. Available in 2½- or 3-inch diameters for operation on standard voltages and in a variety of mounting arrangements to fit specific design requirements.

Address: **Signal Engineering & Manufacturing Co.,** 154 West 14th St., New York 11, N. Y.

NEW "LUNGS" FOR THE LUXURY AIRLINERS!

ANOTHER AIRESEARCH FIRST!

Today you ride comfortably in a modern airliner up 20,000 feet or higher because its cabin is *pressurized.*

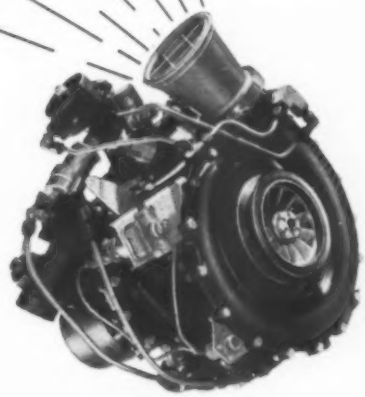
This means that the thin, icy-cold outside air is scooped up, compressed, warmed and delivered inside the cabin with its life-giving oxygen, near sea-level in density, *breathable!*

This miracle is made possible chiefly by the cabin pressurizing systems pioneered by AiResearch. Now—backed by years of experience—the engineers of AiResearch have developed a *new* supercharger—the vital "lungs" of the pressurizing system.

This new supercharger weighs only 66 lbs. and is hat box in size. Yet one of them produces 73 lbs. of compressed air a minute—enough to keep 40 people breathing comfortably at high altitudes. Also, its two-speed principle permits plane's refrigeration system to operate *on the ground,* keeping cabin air cool and fresh.

Variations of the new AiResearch supercharger are on the latest high-altitude transports: the Martin 404, Convair 340, and Lockheed Super-Constellation series.

Another AiResearch *first*—this new supercharger reflects our ability to solve problems of unusual difficulty in the field of aeronautics.



The new AiResearch supercharger (cabin pressurization compressor) has the highest efficiency rating ever achieved in equipment of this kind.

AiResearch
DIVISION OF
THE GARRETT CORPORATION

• AiResearch — Specialists in the design and manufacture of equipment involving the use of high-speed wheels — is a leader in the following major categories:

Air Turbine Refrigeration • Cabin Superchargers • Gas Turbines • Pneumatic Power Units • Electronic Controls
Heat Transfer Equipment • Electric Actuators • Cabin Pressure Controls

AiResearch Manufacturing Company, Dept. C-9, Los Angeles 45, California

Flight Refueling

means

- **EXTENDED RANGE**
- **INCREASED PAYLOAD**
- **GREATER SAFETY**
- **SHORTER TAKE-OFF**

A practical means of range extension, without resorting to an increase in aircraft size and carrying capacity, has been made possible by a new flight refueling technique.

Security regulations do not yet permit a full disclosure of the notable results achieved in military applications, but the many advantages of flight refueling are available to commercial operators. The use of this technique will allow greater aircraft utilization, and will reduce direct operating costs substantially.

FLIGHT REFUELING INC.

Specialists in Aircraft Fueling Systems and Equipment

Danbury, Conn., U.S.A.

MRA: Can It Solve Airline-Labor Problems?

Movement makes headway among airlines and union leaders in Miami; 500 attend assembly.

By ERIC BRAMLEY

WHETHER Moral Re-Armament will prove to be the answer to airline-labor problems is a question that can't yet be fully answered, but the fact remains that this movement has made considerable headway in that direction among the airlines in Miami.

Almost 500 officers and employes of these airlines, plus union officials, attended MRA's recent World Assembly at Mackinac Island, Mich.—best evidence that MRA is of more than passing interest.

Simply stated, MRA, a movement that started in Europe, is based on "what's right, not who's right." Its four cardinal principles are absolute honesty, unselfishness, purity and love.

Chicago, and not Miami, was the city where MRA first gained attention among the airlines. United Air Lines and its pilots, negotiating a new contract, were far from agreement. Through the principles of MRA, as applied by UAL President W. A. Patterson and some of the pilots, differences were reduced to a few.

Then, however, for an as yet unexplained reason, negotiations broke down. The pilots went on strike, came back under a truce, and a contract has not yet been signed. UAL was not represented at Mackinac Island.

However, despite this, here's what has happened in Miami:

Strike Averted

• **National Airlines** completely settled bitter differences with its pilots, represented by the Air Line Pilots Association.

• **NAL, Pan American World Airways and Eastern** were the principal sponsors of the visit of two MRA plays to Miami. Over 25,000 persons, mostly airline employes and union officials, plus their wives and families, attended.

• **These same airlines,** plus ALPA, had training sessions for employes in the principles of MRA.

• **These developments** preceded the Mackinac Island meeting. Those who attended went *in company airplanes at company expense, flown by pilots who wouldn't accept pay for the trip.*

MRA first gained prominence in Miami early this year. NAL and its pilots had had no love for each other since the 10-month strike in 1948. Again there were grievances, and again the pilots had taken a strike vote.

About this time, Larry Alldritt, Miami manufacturer, called G. T. Baker, NAL president, and asked for an appointment to explain MRA. Baker brushed him off three times, finally gave him half an hour at 11:30 a.m., just before a NAL executives' luncheon.

Baker's first retort to Alldritt was, "I'm busy today. Where do I sign and how much does it cost?" Alldritt explained that there was no cost and nothing to sign. He was still explaining MRA to Baker and the NAL lunchers at 4 p.m.

Friendly Talk

Result was that Baker had his first friendly talk in years with W. T. "Slim" Babbitt, ALPA's Miami regional vice president. Strike hearings before the National Mediation Board were postponed while NAL and ALPA representatives attended an MRA assembly in Washington, D. C.

Following the assembly, Baker and Babbitt met in a Washington hotel room. Result: no strike.

In a letter to all NAL pilots, Babbitt explained: "Before you fellows get any ideas that Babbitt's horizon has tumbled, or that his gyro is spinning, or that he has been drinking compass fluid, I want to say that, in all fairness, when I first was approached by MRA representatives, I was very skeptical." He added, however, that in Washington "we got further in three hours than we had in three years."

Baker too had been skeptical. He thought MRA was "some gimmick labor was using to get me down." It took, he added, "an apology on my part and absolute honesty to restore a basis of confidence."

Today, Baker will tell you frankly that he's not yet a 100% MRA'er. On honesty—the what's right not who's right—he believes he's scored. Absolute unselfishness, purity and love haven't been achieved yet. And Slim Babbitt says, "It is unmerciful all the changes I have got to make."

The NAL strike settlement was the primary reason for airline sponsorship of the MRA plays, "Jotham Valley" and "The Forgotten Factor," in Miami.

During the plays, speeches of endorsement were made to the audiences by Capt. E. V. Rickenbacker, president of Eastern Air Lines; Sid Shannon, EAL vice president-operations; W. L. Morrison, PAA's vice president-Latin American Division; Humphrey Toomey, general manager of LAD; J. M. Rosenthal, NAL's vice president-labor relations; John Morris, NAL vice president; Edgar Chambers, International Association of Machinists; William Grogan, international vice president, Transport Workers Union, Babbitt and others.

Probably the frankest statement was made by William Archer, a National pilot. "Some of you people," he said, "would know me better if I had a picket sign around my neck . . . You may think you run up against people that are cynics and hard to convince. The pilots group in National . . . was southeastern headquarters for cynicism.

"You laugh, but you don't know how serious it was. You don't know how people can lie awake at night, and hate, even when there wasn't any strike and things were straightened out. You can sit up there at night on the way to New York . . . It is only three hours in a DC-6 but it's a long time to sit there.

"You get to thinking and you get madder and madder. You pull out the mixture control to 'Full Rich.' We'll burn up another hundred gallons of gas. Let's run them out of money. These MRA people came down here and they did wonders. I want to make this clear. There is not any trouble on National Airlines that you will ever hear about."

A Dissent

There's been at least one dissenting voice about MRA. David L. Behncke, who was recently voted out as president of ALPA (see page 13), said that MRA "is obviously playing a major part in the current ALPA trouble. I have said of MRA that I am against all such mass movement doctrines. I was born in a religious home . . . and the Bible is still good enough for me . . .

"This cult-resembling movement has no place in our representing organization. It is basically against unions and as one government official put it, 'According to MRA doctrine, the employer gets what's right and the employe gets what's left.' "

Whether the movement will keep the momentum it has already gained, and whether it will spread, no one can tell now. There is always the possibility that some issue will bring about a stalemate, as it evidently did at United. But at least there are a lot of people in Miami who think otherwise.

Airline Personnel

TRAFFIC & SALES

Hussey Mariner

James W. Mariner promoted from cargo sales manager of Northwest to new position of general sales manager. **Charles R. Hussey** becomes manager of agency sales, **William M. Hansen** becomes manager of international sales and **David H. Newton** is now manager of sales promotion.

Frederick M. "Ty" Tyvoll appointed personnel director for Pacific Northern.

E. Curtis Cluff, Jr. named Hawaiian Airlines' director of public relations.

Abdel Fattah Kazamel, formerly TWA's public relations manager in Cairo, has been appointed manager of the New York office of the Egyptian Tour Bureau.

Ernest S. Hawkinson has rejoined Pan American as dtm in Caracas. He succeeds **J. Marshall Sinclair** transferred to Havana.

Francisco Rucavado named LACSA's special representative in Miami.

Joseph W. Herbert has been named traffic rep. for Pacific Northern.

Charles L. Parker is now Central's Fort Worth regional sales rep.

Ed Thorne named Trans-Texas traffic rep. for the Rio Grande Valley.

W. W. Blanton promoted to adv. and public relations mgr. for Trans-Texas.

Charles L. Parker promoted to Ft. Worth regional sales rep. for Central.

Larry R. Moos named Oakland d.s.m. for Western, replacing **Norman Kidd,** resigned.

Harry Kramer named cargo repr. and **William Gans** passenger sales repr. for BOAC at New York.

OPERATIONS-MAINTENANCE

Capt. William H. Dunn returned to line flying duty with American on Aug. 1 after five years as supt. of flying.

William T. Bredehoft named regional chief pilot for Western in Los Angeles. He succeeds **Jack Thayer,** who returned to flying the line.

Thomas T. C. Davis appointed regional commissary supervisor for Pan American in Rio de Janeiro, succeeding the late **George Vincent.**

S. P. Parker named station mgr. for United at Milwaukee, replacing **Brentano Anderson,** moved to Baltimore in same capacity.

Malcolm B. Heckathorne named station mgr. for Pan American at Houston.

Thomas T. C. Davis appointed regional commissary supervisor for Pan American in Rio de Janeiro.

Capt. Robert E. Joselyn promoted to chief sector pilot at New York for Pan American's LAD.

Airline Commentary

By Eric Bramley

AMERICAN AIRLINES has decided that a walking dictionary works in its Boston airport baggage room. Seems that the lock was broken off a passenger's cardboard overnight case. The agent, in making the report, noted; "Passenger decided against claim when procedure appeared onerous and serpentine and damage was so miniscule." American interpreted this to mean that Scotch tape was easier than red tape.

•

Tom Giffin, of Northeast Airlines' Nantucket office, brings up an interesting point. "Why," he writes, "don't all the domestic scheduled airlines publish information on minimum on-line and off-line connection times in the Official Airline Guide? AAA, SOU and PAI have started it, and it's quite useful. When you're working out a complex routing, it's a nuisance to have to check back in the tariff to see if so-and-so airline will accept a 25-minute connection. If it were printed right with their skeds in the OAG, it would be at your fingertips. What do you think?" Sounds logical to us. What do YOU think?

•

Last issue we commented that the boom in airline business had brought with it many cases of poor handling, lost baggage, lost reservations, etc., and that people might be driven to other forms of transportation.

An experienced (seven years) reservations gal with a major airline has taken the time to answer. Her answer gives no solution to the problem, and we have no comment on it, but we quote from it to give you an idea of how those on the firing line feel.

"How about taking it easy on us reservations and ticket people during the present rush?" she requests. "I am just a very minor cog in the reservations wheel—and short of growing another head, I simply cannot handle any more work. The phone system is good here . . . We have as many lines as the telephone company can install, the switchboard operators service the calls frequently, and we try to give as good service as we can, and improve on it.

"Our procedures here at least are pretty well streamlined, and the whole thing works pretty smooth. We have bugs, yes, and make errors, and have our share of unhappy passengers. But just what would you suggest? Our ticket counters have little or no more room for anyone else to work, goodness knows, and everyone that I know of is working pretty hard.

"We could, of course, follow the railroad and bus example and just not answer the phones, and keep people waiting without any apology or even common courtesy. Would you recommend that?

"I know we could use some bright ideas, but we are all a little tired of being screamed at, ranted at, and bawled out by irate passengers, when all we can do is say 'good morning.' A little cooperation on the other end of the line does help. A lot of that ticket counter jam is because Mr. Jones simply will not pick up his ticket ahead of time or check in more than three minutes before departure time, you know."

•

We have an interesting story on Steve Kent, AMERICAN AVIATION's advertising director. He doesn't know that we know, but it seems that he prevented a substantial schedule delay on a local service airline recently. This airline had engine trouble at a small intermediate point, and the pilot was having difficulty finding out what was wrong. Steve diagnosed the trouble and helped with the repair job. We might add that he spent a number of years with Scintilla Magneto Division of Bendix Aviation Corp. Quite a versatile advertising director, what?

The finest service ever between America's largest cities

AMERICAN'S

between CHICAGO and NEW YORK

The most frequent nonstop service with 25 DC-6 Flagships each weekday

Take your pick! American's new commuter service features the greatest number of nonstop departures to New York—with return flights to Chicago every hour on the hour during the day. In addition, fast DC-6 Flagships with pressurized cabins make this service as luxurious as it is convenient.

For reservations, see your nearest American Airlines ticket office or call your travel agent

Chicago to New York Nonstop

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6 pm • 7 pm • 9 pm • 3 am

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AMERICA'S LEADING AIRLINE

AEROVIAS BRASIL'S owner, Dr. Adhemar de Barros, center, is greeted at Miami International Airport by A. Camargo Neves, left, Brazilian Consul in Miami. The airline executive was in the U. S. to purchase equipment. Behind him are John D. MacArthur, president of Banker's Life and Casualty Co., and Dr. J. Buller Souto, personal secretary to Dr. Barros.

CAB Calendar

Aug. 6—(Docket 4341) Hearing in Northwest Airlines All-Cargo Route Authority Case. Tentative. Examiner Walter W. Bryan.

Aug. 6—(Docket 4052 et al.) Hearing in Mid-West Airlines Certificate Renewal Case. Tentative. Examiner William J. Madden. Postponed from July 23.

Aug. 20—(Docket 4762 et al.) Hearing in Piedmont Aviation Certificate Renewal Case. Tentative. Examiner Ferdinand D. Moran. Postponed from August 13.

Aug. 22—(Docket 3941) Hearing in Robin Airlines Individual Exemption Case. Tentative. Examiner Curtis C. Henderson. Postponed from July 6.

Aug. 27—(Docket 4902) Hearing in CAB investigation of Consolidated Flower Shipments, Inc.—Bay Area. Tentative. Examiner Richard A. Walsh.

Sept. 10—(Docket 4835) Hearing in Capital Airlines Chicago-Milwaukee-Twin Cities All-Cargo Route Authorization. Tentative. Examiner Curtis C. Henderson.

Sept. 10—(Docket 3910) Hearing in Trans-National Airlines Individual Exemption Case. Tentative. Examiner Barron Fredricks.

Sept. 11—(Docket 4863) Hearing in Chicago-Mexico City Interchange Case (Pan American World Airways and Chicago and Southern Air Lines). Tentative. Examiner William F. Cusick. Postponed from August 7.

Sept. 17—(Docket 4850) Hearing in New York-Chicago Cartage Rate Investigation Tentative. Examiner J. Earl Cox.

Sept. 19—(Docket 3915) Hearing in Regina Cargo Airlines Individual Exemption Case. Tentative. Examiner Curtis C. Henderson.

Oct. 2—(Docket 4542) Hearing in Western Air Lines Salt Lake City-Rapid City-Route Case. Tentative. Examiner William J. Madden.

Jan. 2—(Docket 4059 et al.) Hearing in Tariff Liability Rules Investigation. Tentative. Examiner R. Vernon Radcliffe.

Over The Counter

Sales Promotion

OUT after convention business, 12 airlines serving Chicago have joined in a cooperative effort to serve delegates attending large conventions in that city. An airline service center will be set up at the headquarters of each major meeting, with each participating carrier taking its turn at manning the desk. Each line has its own insignia on a wall plaque behind the desk. Idea has already been tried at the National Restaurant Association convention with excellent results. Airlines are **American, United, TWA, Eastern, Braniff, Chicago and Southern, Capital, Mid-Continent, Northwest, Delta, Trans-Canada and Wisconsin Central** . . .

Pan American World Airways has installed dictation equipment on its President Special flights to Paris. The portable instrument, a Gray Audograph, allows a passenger to dictate during flight and then mail unbreakable discs back to his home office for transcription. Another use will be to record informal in-flight interviews, with passengers receiving the discs as souvenirs. PAA may extend the service to other flights if the experiment is successful . . .

A large group of salesmen, who had won trips as prizes, recently flew to Havana via **Chicago and Southern.** Wives had not been included, so C&S mailed each wife a small bottle of French perfume. The attached note remarked that the husband had probably forgotten to describe the many bargains that women can get in Cuba (such as the perfume). The sales pitch was that "Cuba is not a 'man's paradise'—it is an ideal family vacation land" . . . C&S is having a new motion picture, "West Indies, Ho!" produced for it by Burke Dowling Adams Inc. and Film Production Service, New York . . .

Central Airlines has furnished four of its male pursers with cameras, and told them to take newsworthy pictures. Local papers have been using them . . . Central is also commissioning every enlisted man who rides on its military charter flights as a "General of Central Airlines Air Fleet" . . .

For the benefit of passengers interested in the oil industry, **Pioneer Air Lines** is distributing 14 Five Star oil reports daily aboard its planes. Six copies are put aboard daily in Dallas, three in Houston, five in Midland-Odessa. They're furnished by Five Star Petroleum News Corp. . . . **Braniff Airways'** business bureau department has issued following new trade development studies: Industrial Pattern of Chile, Motor Transport in Brazil, Economic Frontier of Western Hemisphere, New Peruvian Oil Legislation, Industry in Colombia, and Peru: Business, Industry and the Future . . .

Northwest Airlines has published a new folder, "National Park Tours," describing tours of Olympic and Mount Rainier National Parks, and Mt. Hood National Forest. Two-day all-expense tours originate in Seattle . . . Special Grand Canyon all-expense tours are to be featured in new travel folders produced by Frontier Airlines . . .

Traffic and Sales Offices

AIR FRANCE has opened a new street level office in Washington at 1518 K St. It includes a business office, executive offices, and a theater room where travel films will be shown to travel agents and various groups . . . **Trans-Texas Airways'** Houston city ticket office is now located in the Mellie Esperson Building . . .

New Services and Traffic

CIVIL Aeronautics Board has stayed its decision on tour basing fares until Sept. 30, thus eliminating temporarily the need for cancellation of the promotional tariffs previously scheduled for July 17. Affected are tariffs of Pan **American, Panagra,** and **Braniff** which named special fares for use only in constructing package-type tours between U. S. and Latin America. CAB had found the fares unlawful and directed cancellation. However, numerous tickets had been sold, and the carriers requested extension to permit completion of this summer's promotional program . . .

Look for **American Airlines** to expand its low fare services next fall when more DC-6B's will have been delivered . . .

British Overseas Airways Corporation has added a fourth weekly Constellation flight between New York and Bermuda, leaving New York on Thursdays, returning the following day.

Happy Landing at Linden

It's all here! Everything any private or corporation flyer needs in the way of perfect facilities for inbound-outbound New York City air traffic.

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Cities Service Aviation Gasolenes

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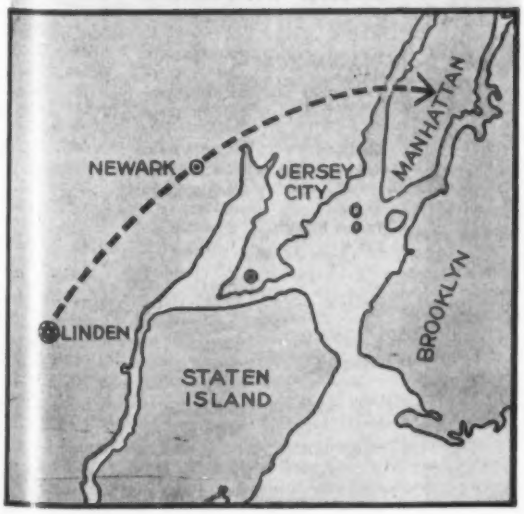

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There's never a landing fee, and you'll find it as convenient as it is economical to store your plane at Linden. Be sure to make Linden Airport your stopover point when visiting in the New York area. Three major bus lines pass the door, plus Pennsylvania rail connections direct to New York.

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United Protests AA's Travel Plan Practice

United Air Lines asked CAB to investigate American Airlines' practice under which certain air travel plan subscribers are permitted to issue and validate their own tickets.

UAL claimed that American furnishes stocks of blank tickets, bearing AA's name, to subscribers together with validating stamps. Subscriber writes his own ticket, charging it to his travel plan account.

American is "evading" an agreement among airlines under which airline names are omitted from travel cards in order not to influence cardholders to use a particular line's services, United charged.

Daily Plane Utilization

Domestic

		March	April
American	2 eng. pass.	5:11	5:21
	4 eng. pass.	8:40	9:11
	cargo	4:30	4:01
Braniff	2 eng. pass.	7:09	7:06
	4 eng. pass.	8:04	8:09
	cargo	7:40	7:38
Capital	2 eng. pass.	7:19	7:20
	4 eng. pass.	7:43	7:54
	cargo	5:11	4:00
Caribbean	2 eng. pass.	4:34	4:07
C & S*	2 eng. pass.	8:12	8:07
	4 eng. pass.	8:04	8:10
Colonial	2 eng. pass.	6:21	6:13
	4 eng. pass.	6:35	6:16
Continental ..	2 eng. pass.	6:15	6:03
Delta	2 eng. pass.	7:00	7:02
	4 eng. pass.	8:15	8:19
	cargo	6:57	6:05
Eastern	2 eng. pass.	8:25	9:03
	4 eng. pass.	10:04	10:19
	cargo	3:32	3:23
Hawaiian	2 eng. pass.	4:30	4:06
	cargo	3:22	2:57
Inland	2 eng. pass.	10:49	10:52
	4 eng. pass.	6:38	7:02
MCA	2 eng. pass.	6:14	6:45
National	2 eng. pass.	7:18	7:09
	4 eng. pass.	11:58	11:44
	cargo	4:42	3:46
Northeast	2 eng. pass.	5:48	5:59
Northwest	2 eng. pass.	2:36**	...
	4 eng. pass.	6:25	7:21
	cargo	:21	...
Trans Pacific ..	2 eng. pass.	3:18	3:16
TWA	2 eng. pass.	5:32	5:49
	4 eng. pass.	8:42	8:00
	cargo	4:48	4:22
United	2 eng. pass.	5:44	6:01
	4 eng. pass.	7:57	7:52
	cargo	4:02	3:34
Western	2 eng. pass.	6:09	6:28
	4 eng. pass.	5:32	6:31

* C & S for February: 2 eng. pass. 8:50
4 eng. pass. 6:08

** All Martin aircraft were removed from service March 17, 1951.

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SERVICE

for their passengers' convenience at destination!

★ Hertz, and only Hertz, can and does deliver cars to airports in more than 500 cities. Hertz maintains stations right at the airport in 73 key cities.

★ Hertz is dependable—the world's largest and only nation-wide and international car rental system—uniformly conducted stations in more than 500 cities—over 25 years' car rental experience.

★ The Hertz national advertising program consisting of full page ads throughout the year in Life, Post, Collier's, Holiday, Esquire, Time, Newsweek and U. S. News, promotes the Plane-Auto Travel Plan, creates new air travelers, puts new business on your planes and builds Hertz popularity and prestige.

★ Your passengers, renting cars from Hertz at their destination, can be sure of fine, new cars that are clean and properly conditioned. Gas, oil and *insurance* are included in low standardized rates—no hidden extras, no minimums.

★ Your passengers can rent from Hertz day and night for any length of time and enjoy quick, courteous, efficient service. Hertz National Courtesy Cards are carried by more than one million men and women.

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CAA'S Airport Projects Face Big Cut

Smaller fields, big terminals won't be built unless Congress restores appropriations cuts.

By KEITH SAUNDERS

THE current fiscal year threatens to be a lean one for airport construction work unless at least one of the following actions occurs:

1. **The Senate** decides to restore and persuades the House to accept restoration of crippling cuts made in CAA's Federal Airport Program appropriation by the House Appropriations Committee, or

2. **Airport interests** can induce Congress to "unfreeze" $15,500,000 in airport funds which were virtually "impounded" from last year's airport appropriation by order of the Budget Bureau and President Truman on the premise that Federal funds should be spent only on those airport projects having real value to the military.

Such was the prospect that arose from the House committee's action last month in taking heavy whacks at CAA's entire budget, and especially at the airport funds. Here's what happened:

• **Budget estimates** for the airport program for fiscal 1952 totaled $54,000,000, including $30,000,000 for liquidation of prior-year contract authority, and $20,000,000 for new airport improvement and construction projects.

• **Against this,** CAA had on file requests from 244 city, county and state sponsors, with matching funds available, in the amount of $58,000,000 for airport work, all of which met the President's criteria for defense construction.

• **The House committee** whacked $15,000,000 out of the liquidation funds and cut $3,000,000 from the airport construction funds.

The proposed cut in liquidation funds was not critical, because the government is obligated to provide the funds. When they are needed they can be procured through a supplemental appropriation. Reasons for putting the money in the budget was to make certain that Federal-aid funds due to project sponsors might be available as needed, and deletion of the $15,000,000 could well mean that there will be delays in some instances in making such payments.

Affects Military

Much more serious was the $3,000,000 cut in the $20 million airport construction funds, for the original figure itself was too low to meet real needs. Failure of the Senate to restore an appreciable part of this cut will necessitate not only the curtailment of the number of locations, but also of the scope of planned construction projects. It will, moreover retard the work CAA is currently doing with the military on expansion and improvement of certain airports to facilitate joint civil-military usage.

Obviously, the $17,000,000 left in the airport appropriation cannot cover even the most urgent of the $58 million in project requests in CAA's files.

Undoubtedly, a good many smaller airports will have to be struck out of the program entirely or deferred indefinitely, although CAA said that contributions to the national defense will enable it to keep in a number of small fields designed primarily for use by agricultural planes, oil companies, and similar interests.

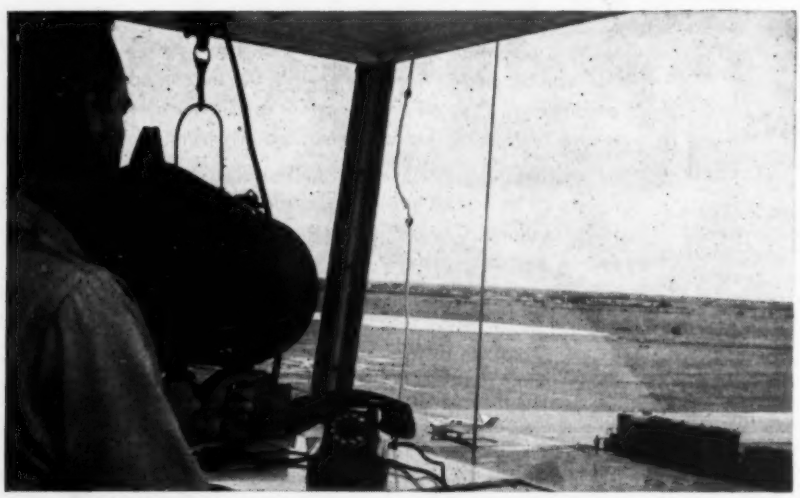
Certain to be hit, if CAA fails to get more money, are a number of large cities just starting long-delayed and badly needed terminal buildings. These include Cleveland, Columbus, Newark, San Francisco and Indianapolis. Requests from these cities for matching Federal-aid grants will certainly exceed the total available for the entire Federal Airport Program for the year. Some of these cities will have to dig up more local money, modify their plans or delay start of construction.

Furthermore, CAA had only about $5,000,000 in unexpended funds left over from its fiscal 1951 airport appropriation, and reallocation of this money would not help matters too much. The balance left over the year before had been $24,500,000.

The "unfreezing" of the $15,500,000 "impounded" from last year's appropriation has therefore assumed vital importance to airport people, and members of the Airport Operators Council and other interested groups have begun calling the attention of Congress to the situation.

This money is now tied up because of its inclusion in House Document No. 182, the so-called Rescission Act. If Congress can be persuaded to delete it from the list, the money will become available to CAA immediately, and in this event, the Federal Airport Program during the current fiscal year will not be hurt too badly.

However, if most of the House cuts in airport funds stand, and if the $15.5 million cannot be "unfrozen," the airport program will face rough going for the next year.



THE WORLD'S FIRST airport tower-controlled railroad went into operation recently at Wichita's Beech Field. As soon as a train from the Frisco spur line enters Beech Aircraft property, the Beech tower takes over. The train's engineer keeps an eye on the tower for a green light before crossing the runway. Frisco railroaders say they're going to name the spur "The Bonanza Line."

AIRPORT PEOPLE

James P. Devinney has won a permanent appointment as airport manager at Atlantic City, N. J., where he has been acting manager since 1948.

Cecil Reeves has been named airport manager at Douglas, Wyo., on a temporary basis.

Frederick A. Pomeroy, a former CAA traffic controller, has been appointed manager of Topeka (Kans.) Municipal Airport. He replaces **Harry Buff,** manager for the past seven years.

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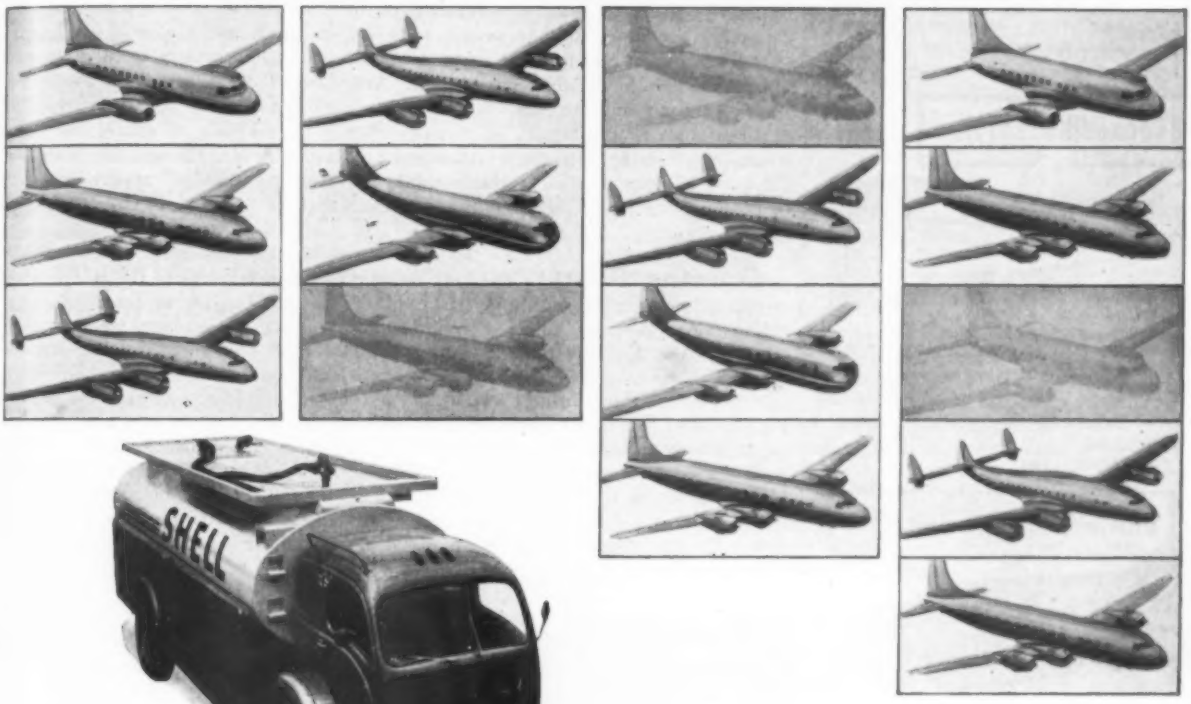

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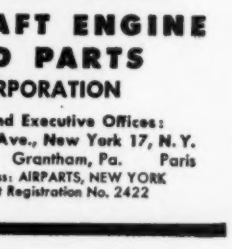

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Airport News Digest

NPA Order M-4: Anyone wishing to start an airport construction project of any appreciable size must now apply to CAA's Office of Aviation Defense Requirements for authority to begin construction under National Production Administration Order M-4, purpose of which is to conserve critical materials and services required for the defense program. Power to make such authorizations was granted to CAA recently under the Controlled Materials Plan. Although certain types of construction are exempted under Order M-4, a specific authorization is mandatory for any project requiring as much as 25 tons of steel. Applications should be made on Form CMP-4C, obtainable at any CAA Regional Office, and should be addressed to CAA, Attention: W-30, Washington 25, D. C. Issuance of an authorization to commence construction will not carry with it any assurance that materials or equipment will be available to enable the construction job to be completed. Allotments of critical materials will be made by CAA to holders of such authorizations, however, on separate application and in conformance with CMP allotments to the Office of Aviation Defense Requirements.

Growing Pains: The need for utmost vision and care in the planning of airport administration buildings has been demonstrated again at Seattle-Tacoma International Airport, where expanding aviation activity already has virtually outgrown the $3,500,000 modern terminal building. This building was one of the finest and largest in the country when it was dedicated just two short years ago, yet when three airlines sought ticket counter and office space in the building recently, the airport management found it could accommodate only two of them. It was thought that, with some juggling of available space, all three could be squeezed into the terminal, but it will not be a happy situation. All of which lends support to the idea of functional designing of terminal buildings, so that inside partitions can be knocked out or shifted as required. This is one of the things CAA's Office of Airports will stress in its forthcoming design criteria study.

ADMINISTRATION BUILDINGS

- **CAA has approved a grant offer** of $1,500,000 toward cost of building a new $5,500,000 passenger terminal at Newark Airport.
- **Construction has been started** on the first unit of a terminal building for Detroit-Wayne Major Airport, with completion set for next May.
- **A new $775,000 administration building** at Rochester (N. Y.) Municipal has been started.
- **Work is now under way on** new $850,000 terminal at Sky Harbor Municipal, Phoenix.
- **New terminal at Flagstaff** (Ariz.) Municipal has been formally dedicated.
- **Structural steel work** on new $1,800,000 terminal building at Bradley Field, Windsor Locks, Conn., has been completed.

RUNWAYS, OTHER PAVING

- **Bids have been advertised** for adding 600 feet to the 3600-ft. main runway at Augusta (Me.) State Airport.
- **New 7000-ft. runway at Kansas City** Municipal Air Terminal is nearing completion.
- **Resurfacing of the aprons** at Decatur (Ill.) Municipal is in progress.
- **A $360,000 contract for extending** the NW/SE runway at Dallas' Love Field 1000 ft. to a length of 6200 ft. has been let.
- **Reconstruction of the NW/SE runway** at Buffalo (N. Y.) Municipal is expected to start this month.

LIGHTING

- **A $50,000 contract has been let** for installation of taxiway lights and other lighting at Worcester (Mass.) Municipal.
- **New lighting system** at Capital City Airport, Lansing, Mich., has been formally commissioned.

HANGARS

- **TWA has applied for permission** to build a $2,500,000 maintenance hangar at Chicago's Midway Airport. It will rent an Eastern Air Lines hangar in the interim.
- **Norfolk (Va.) Port Authority has let** contract for $90,000 for construction of a 100 x 121 ft. hangar to be leased to Piedmont Aviation.

CAA AIRPORT GRANTS

Federal-aid airport grant offers totalling $10,444,123 were made by the Civil Aeronautics Administration during the first three weeks of June to 102 communities, with airport classes in parentheses, as follows:

Alabama: Birmingham Municipal (5), $54,000; Dothan Mun. (3), $14,400; Gadsden (4), $15,000; Muscle Shoals (3), $10,000.

Arizona: Tucson Mun. No. 2 (5), $13,370.

Arkansas: Ft. Smith Mun. (4), $6,770; Adams Field, Little Rock (4), $196,309 (two offers); Stuttgart Mun. (4), $12,338.

California: Napa County (4), $8,928; Sacramento Mun. (5), $62,320; Lindbergh Field, San Diego (8), $156,400; San Francisco International (7), $1,063,212 (two offers).

Colorado: Stapleton Airfield, Denver (6), $740,818 (four offers); Sterling Mun. (2), $7,302.

Delaware: New Castle Co., Wilmington (6), $15,300.

Florida: Miami Inter. (7), $716,227.

Idaho: St. Maries Mun. (1), $3,346; Sandpoint Mun. (2), $19,979; Twin Falls Mun. (3), $7,266.

Indiana: Michigan City (2), $45,000.

Illinois: Murdale Airport, Carbondale (2), $10,000; Cairo Mun. (3), $41,000; Decatur Mun. (4), $30,000; New Rockford Mun. (2), $3,000; Quincy Mun. (4), $28,000.

Iowa: Des Moines Mun. (4), $18,000; Iowa City Mun. (3), $66,100; Sioux City Mun. (6), $215,000; Waterloo Mun. (4), $25,000.

Kentucky: Ashland (2), $31,000; Greater Cincinnati Airport, Covington (4), $23,000; Blue Grass Field, Lexington (3), $6,000; Middlesboro (2), $50,000. Somerset (2), $70,300.

Louisiana: Shreveport Mun. No. 2 (5), $431,036.

Maine: Auburn-Lewiston (3), $5,000.

Massachusetts: L. G. Hanscom Airport, Bedford (4), $42,500; Logan International, Boston (7), $421,842; New Bedford Mun. (4), $93,200.

Michigan: Escanaba Mun. (3), $41,700; Reynolds Field, Jackson (3), $14,000.

Minnesota: Anoka Co. Airport (3), $192,100; Austin Mun. (3), $110,000 (two offers), Grand Rapids Mun. (2), $6,000; Jackson Mun. (1), $7,500; Wold Chamberlain Airport, Minneapolis/St. Paul (5), $275,000; Fleming Field, So. St. Paul (2), $18,500.

Mississippi: Clarksdale Mun. (3), $82,000; Crosby Mun. (1), $24,375; McComb-Pike County (2), $10,294; Jackson Co. Airport, Pascagoula (3), $7,250.

Missouri: Rosecrans Mun. St. Joseph (5), $40,550; Lambert-St. Louis Mun. (8), $306,000.

Montana: Flathead Co. Airport, Kalispell (1), $9,669.

Nebraska: Modisett Field, Rushville (1), $[illegible]500; Wahoo Mun. (1), $18,750.

New Jersey: Ocean City Mun. (2), $10,000

New Mexico: McKinley Co. Airport, Gallup (3), $148,131; Truth or Consequences Mun. (3), $7,094.

New York: New York International (7), $275,750 (two offers); Rochester Mun. (4), $469,000.

North Carolina: Hickory Mun. (3), $39,500.

North Dakota: Bismark Mun. (4), $8,800; Dickinson Mun. (4), $8,000; Jamestown Mun. (4), $19,000; Parshall Mun. (1), $1,800; Rugby Mun. (1), $2,500; Stanley Mun. (1), $2,500; Valley City Mun. (3), $7,000; Sloulin Field, Williston (4), $11,000.

Ohio: Akron Mun. (4), $50,000; Blue Ash Airport, Cincinnati (5), $100,000; Cleveland Hopkins Mun. (5), $355,900; New Philadelphia Mun. (3), $15,500; Van Wert Mun. (2), $25,000.

Oklahoma: Ada Mun. (4), $12,845; Will Rogers Field, Oklahoma City (6), $103,685; Fairgrounds Airpark (1), $24,920.

Oregon: Corvallis Mun. (3), $17,936; McMinnville Mun. (4), $9,769; Pendleton (5), $43,844; Roberts Field, Redmond (5), $6,551.

Pennsylvania: Bradford Mun. (3), $12,500; Hazleton Mun. (3), $225,000; Wilkes-Barre/Scranton Mun. (4), $85,400.

South Dakota: Sioux Falls Mun. (4), $20,623.

Texas: Jefferson Co. Airport, Beaumont (4), $107,250; Cliff Maus Mun., Corpus Christi (5), $91,238; Val Verde Airport, Del Rio (4), $10,000.

Utah: Cedar City Mun. (3), $7,179; Provo Mun. (5), $95,930; Salt Lake City Mun. No. 1 (5), $120,859.

Washington: Seattle-Tacoma International (6), $31,068; Walla Walla (6), $33,000.

Wisconsin: East Troy Mun. (1), $17,350; Fort Atkinson Mun. (1), $20,000; Truax Mun., Madison (5), $197,500; Maniwotoc Mun. (3), $91,250; Billy Mitchell Field, Milwaukee (6), $701,000; Palmyra Mun. (1), $8,600; Alexander Mun., Wausau (3), $60,500.

CAA Specification Changes

Beech 214 propellers are approved for use in certificated aircraft, according to CAA specification P-877-1, dated April 16, 1951.

Fairchild Ranger ISO-Rev 21 propellers are approved for use in certificated aircraft, according to specification P-876-1, dated April 16, 1951.

Taylorcraft 15A model specification No. 3A3 has been published with specifications pertaining to the new Model 15A, 4 PCLM ship approved 4/3/51.

Beech 35 series is approved with Oil cooler tank (Beech 35-939172) according to revision 15 of aircraft specification A-777.

Hamilton Standard 12D propellers are changed to include note 2 which specifies that a dash and a number specifying inches be added to the blade model designation to show reduction in propeller diameter. If by telescoping, suffix with "T:" if by square cutoff, indicate with "S." These blades are eligible the same as standard cutoffs.

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Lightplane Production Won't Meet Demand

Manufacturers expect materials for 3,500 planes yearly, but fleet will still shrink.

ALTHOUGH personal plane manufacturers can reasonably expect to get a substantial increase in materials during the last three months of 1951, they won't be keeping up with the demand for their aircraft.

The increase will permit them to step up production to an annual rate of 3,500 aircraft, provided they limit distribution to essential users. It's likely to be granted because:

•**Air Coordinating Committee,** top policy group, has urged Defense Production Administration to make allowances in fourth-quarter controlled materials allotments for that number of planes.

•**Civil Aeronautics Administration** survey shows that of the 60,000 active non-carrier aircraft in use today, approximately 89% are being utilized in some manner in business, industry and agriculture. (See table).

Even with this production, however, the civil non-carrier plane fleet won't hold its own—*it will shrink 1,295 planes a year,* according to CAA.

No increase in 1951 production between now and year-end will result. About 2,500 personal planes will come off the lines this year. Effect of the increased materials will be felt in early 1952.

ACC's recommendation that approval be given the allocation of critical materials for the production of 3,500 non-carrier aircraft carried with it two additional recommendations:

"That the claimant agencies (CAA) encourage the aircraft manufacturers voluntarily to limit distribution of aircraft produced . . . to activities listed . . . as 'defense-supporting' requiring, when considered necessary, that the manufacturer report on sales made.

"That if, from the reports received, it appears that the aircraft are being distributed to non-essential users, claimant agencies and the NPA Aircraft Industry Division investigate the desirability of formal controls for the distribution of aircraft produced with this priority assistance."

CAA's new statistical aircraft use survey, consisting of a careful sampling of plane owners, brought replies which indicated that 89% of the active non-carrier aircraft fleet are being used in connection with "defense-supporting" activity.

Planes used in connection with businesses or professions, for example, lead the field with 18,244 aircraft; industrial and instructional flying are next with 13,506 planes; agricultural flying ranks third with 11,715 ships. Pleasure and sports flying, rating fourth with 10,801 planes, was defended on the grounds that such flying is doing a great deal to keep airports open and an aircraft and pilots' pool available for use in an emergency.

Another major consideration in the pleasure plane fleet is its use to relieve other means of transportation in an accelerated production period.

Because of slowdowns caused by lack of materials, AIA figures fail to show the usual spring upswing in new plane manufacturing. The first five months of 1951, as compared with the same months in 1950, show the trend; the remainder of the year is expected to show still greater contrasts:

1951 Shipments (Units)		1950
January	246	153
February	231	219
March	270	325
April	231	321
May	232	366
Total	1,210	1,384

According to another CAA study, an annual decrease of 1,295 planes is probable, even with priority assistance for the yearly manufacture of 3,500 aircraft. Using 1950 as a typical mobilization year, in which 3,428 new planes were built, CAA shows that 2,352 planes were either destroyed or damaged beyond repair in accidents; that 500 ships were lost in hangar fires, tornadoes and other 'Acts of God'; that 1,200 were taken out of active use due to obsolescence, etc.; and that 408 new planes and 263 used or surplus planes were exported.

The total number of planes lost to the active civil non-carrier fleet in 1950 was estimated at 4,723—or 1,295 more than were manufactured.

Although heartily endorsed, the ACC-recommended materials for 3,500 planes are therefore still inadequate to keep the total number of active planes at the 1950 level of 60,000.

Lower production of new planes this year, with a greater percentage of new ships being exported, threatens to bring the number of active aircraft down still further.

Improvement in production figures will be evidenced in early 1952. No immediate increase in the number of lightplanes manufactured will occur this year, according to the Aircraft Industries Association.

Despite the lack of priority assistance other than spot aids, the aircraft industry has turned out about 1,400 planes so far in 1951. A total unit production of from 2,500 to 2,800 planes can be expected by the end of the year, substantially less than the production total of 1950.

Voluntary allocation by manufacturers to business and essential buyers is already in effect, AIA asserts. Production lines are being kept open and available at no cost to the government and to the benefit of the national economy, it adds.

How Lightplanes Are Being Used

NON-CARRIER USAGE	NUMBER OF AIRCRAFT
A. Agricultural	
1. By farmers, ranchers, etc.	7,481
2. By commercial sprayers	4,234
B. Industrial	
Aerial photography, surveying, patrol, etc.	1,587
C. Instructional	11,919
D. Transportation for Hire	
Passenger cargo, contract, etc.	3,376
E. Business	
Other businesses or professions	18,244
F. Federal, State, and Local Governments	1,066
G. Pleasure and Sports	10,801
H. U. S. Aircraft out of U. S.	836
TOTAL ACTIVE NON-CARRIER AIRCRAFT	**59,544**

Washington View

By Vera Foster

PRIVATE airplanes were given a big boost recently by, of all people, a railroad man. He advocates the use of such aircraft by railroads in the conduct of numerous activities.

Writing in the July 9 issue of *Railway Age,* Charles J. Miller, assistant roadmaster of the Western Pacific, says that the private plane now "can fairly be considered a reliable, usable machine" and deserves consideration "as another tool for use by railroad management in meeting different railroad operating and maintenance problems."

He points out that "it is in the category of the 'unpredicted' uses that an airplane may pay for itself many times over within a few hours. This is in connection with accidents where a key man can be flown to the scene of a wreck and easily determine from the air what equipment is needed and what conditions call for in the way of rerouting equipment."

Other uses suggested by Miller: delivery of messages or parcels, delivery of repair parts, last-minute payroll matters, flood or fire control, routine patrol of lines in difficult country, emergency travel, educating of equipment supervisors by more frequent visits to roadway equipment, more frequent attendance at conferences.

If other railroads agree with Miller's views, there could be a sizeable new market for lightplanes.

•

Militarily, lightplanes have been regarded as useful primarily in observing, training, etc. The newly armed Beech T-34, TEMCO T-35, Fletcher ground support ship and the Mooney, however, give promise of becoming a really significant new development in light plane usage.

•

The Administration is drafting an extension of the G. I. Bill to provide educational assistance to veterans of the Korean war. As in the original bill, flight training will still be in the avocational category.

The House select committee investigating the veteran-training program is attempting to get flight instruction placed under a vocational heading by providing a workable administrative program.

One proposal which, if adopted, will be a radical departure from the present plan, is a scholarship certificate which the veteran may cash for educational training at his own responsibility.

•

Avoid the September 1 rush for Airmen Identification cards and get them now, CAA advises. Issuance of the cards, so far, has been slow.

•

Contract flight training schools have been requested by the USAF to decide upon a standard accounting system, flight instructor's uniform, insurance program, and code of ethics in recruiting personnel, according to the Aeronautical Training Society.

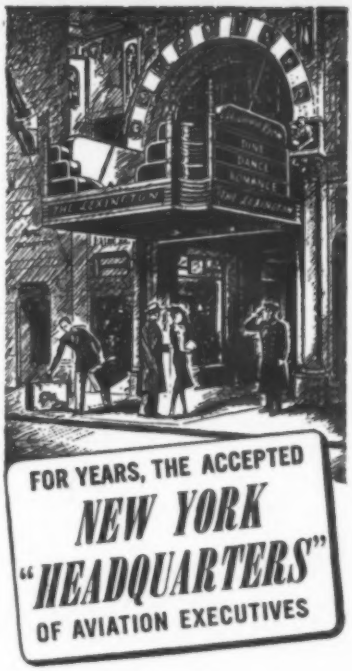
•

The new Luscombe "Observer" now being demonstrated shows the progress made in liaison planes since World War II. The ship is an all-metal, high-wing, plexiglassed photo and reconnaissance aircraft powered with a 125 H.P. Lycoming 0-290-D1 engine.

•

Better insurance rates on planes in the Navion, Cessna, and Bonanza class are offered by the Henry Holland Insurance Service of Buffalo, N. Y. The special rating plan is said to be about 15% lower than has been generally available.

The Holland company offers all-risk ground and crash insurance with nodeductible for fire and theft, and a $250-deductible, regardless of value, on crash and taxiing losses.



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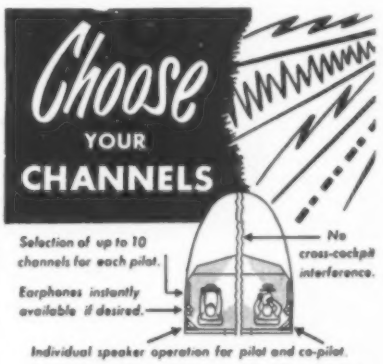

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Integrity

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Books

(*Continued from page 8*)

Thus the many inaccuracies in what should be an authoritative text on air transportation are rather surprising.

For one thing, since this is mid-1951, it seems that final statistics for the year 1950 could have been included without holding up publication unduly but this is not of major importance.

In writing of aircraft speeds Dr. Frederick is almost uniformly inaccurate and his remark about the 360-mile range of the DC-4 is a little startling. At one point he refers to the Martin 204 instead of the 404. DC-3 operators would doubtless like to know how he makes these planes operate at between 120 and 230 miles an hour. This is pure carelessness in not checking the facts.

Early in the book he notes that a plane for feeder service should be designed to stop every 25-30 miles and be able to operate from any 1500-foot square "cow pasture." Such a statement is far from the current thinking of local airlines, CAB and the manufacturers.

On one page he says "Landing aids have lessened the requirements that an airplane be able to maneuver readily and make approaches to airports under conditions of poor visibility." The fact is the more aids we have the lower the ceilings the planes operate into. The lower the ceiling the more critical is maneuverability since there is less time for critical decisions as the plane nears the ground. There are many such misconceptions in the text.

On maintenance subjects Dr. Frederick is somewhat behind the times when he gives details of a 650-hour engine overhaul. Overhauls are now standard at between 1,000 and 1,500 hours. He refers to 4500-hour aircraft overhaul when now virtually all aircraft are overhauled at about 10,000 to 12,000 hours.

His statement that "entry into the industry is relatively easy" is certainly open to sharp challenge. And in writing about air cargo he uses the 1946 figures of American Airlines as a basis of comparing cargo trip lengths and uses surface carrier figures for 1940. The cargo picture has changed so radically in the past four years that such references are invalid today.

Sound textbooks on air transportation are needed and it is too bad that Dr. Frederick didn't fit his own writing more closely with industry reality and 1950-51 trends. A competent industry man could have patched up the book in short order into a first-class text.

OBITUARY

W. W. Kellett

W. Wallace Kellett, 60, pioneer in autogiro and helicopter development and founder of Kellett Aircraft Corp., died in Hahnemann Hospital in Philadelphia, Pa., after a brief illness. Kellett served as executive vice president, president and board chairman of Republic Aviation Corp. between 1938 and 1943.

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IN THE NEWS

SERVICE

Getting top utilization from jet engines requires many techniques. Here are a few of the means used by General Electric to help the Air Force get maximum use from its J47 engines.

To provide immediate service for General Electric apparatus, more than 30 G-E Service Shops are placed strategically around the country. Four of these shops are currently handling aircraft gas turbine work; more can be adapted as required. Skilled technicians provide rapid and complete repair and overhaul facilities.

At an Air Force base, a G-E representative shows Air Force personnel some fine points of jet engine servicing. To back up this field training, formal G-E jet engine schools have been functioning since 1942. Courses are now presented in familiarization, overhaul, flight test engineering, and line maintenance.

G-E service follows G-E equipment around the globe. Here, "tech reps" from General Electric and North American Aviation Inc. in Korea discuss combat performance of the G-E-powered, North American-built F-86 Sabre. G-E aviation field service representatives cover the vital spots in the world, are always available.

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IN FLIGHT

A PAGE FOR ALL PILOTS

How Trans-Canada Air Lines Computes Pilot Pay

OCCASIONALLY it's interesting to look around and see what our neighbors are doing. Of particular interest are the new airline pilot pay scales across the border at Trans-Canada Air Lines. The Canadian Air Line Pilots Association, an affiliate of our own ALPA, has recently completed a new contract with the company. This contract, providing raises in almost direct proportion to the cost of living increases since the last contract, has some noteworthy aspects.

U. S. airline pilots get a very small basic salary. At American Airlines, for instance, top basic salary for a captain is $300. At Trans-Canada the captain gets a basic salary of $630 during his first six months flying DC-3's over mountainous terrain and $680 if he is flying the DC-4M. This salary is scaled upward periodically through the third year, by which time the DC-3 captain is earning $880 and the DC-4M pilot $930.

The difference between the two countries is primarily one of wage computation. The TCA/CALPA contract for domestic flights is a flat salary type of arrangement. By comparison, the American Airlines pilot with a basic salary of $300, flying the DC-6 85 hours monthly in both night and day operations, actually earns $1,184.13. Thus his basic wage is only 25.4% of his total earning.

The U. S. airline captain pay is based on fixed salary plus hourly flying pay, incorporating premiums for night flying and mileage pay.

If the TCA pilot is flying over mountainous terrain his pay is upgraded accordingly. This is best realized by the captains' salary tables shown here.

	Twin-Engine		Four-Engine
1st Year	Mountainous	Flat	
1st Six Months	$630	$580	$680
2nd Six Months	680	630	730
2nd Year			
3rd Six Months	680	630	730
4th Six Months	780	730	830
3rd Year			
5th Six Months	780	730	830
6th Six Months and thereafter	880	830	930

The first officer or co-pilot rates look like this:

1st Year	$240	5th Year	$475
2nd Year	300	6th Year	495
3rd Year	360	7th Year	515
4th Year	420	8th Year and thereafter	535

It might be noted that co-pilot pay in the U. S. is also based on a flat salary, but in the current negotiations between ALPA and the airlines—particularly American and United—a proposal is made that co-pilot pay be changed to reflect fixed wage plus hourly flying pay and compensation for gross weight and mileage. Thus at this date the TCA co-pilot is paid on much the same basis as the U. S. pilot.

Pilot flying time, under the TCA/CALPA agreement, is limited to 255 hours per quarter when flying twin-engine equipment over flat terrain or to 225 hours when flying mountainous terrain. There is an interesting cushion arrangement in this flight time allowance. If it is apparent that during the course of a given flight from his home base the pilot will exceed the established quarterly limit (above), the pilot will still accept this flight if it does not exceed 260 or 230 hours. This provides a-five hour cushion in scheduling maximum quarterly flight time.

In four-engined equipment, the TCA pilots are limited to 900 hours per year. If a pilot flies less than a full year, his limit is based on a maximum of 75 hours per month. The time cushion for four-engine pilots is provided by an agreement that they will fly a given trip if the one-way flight from home base to destination does not exceed the established maximum flight time.

After a co-pilot has been flying for five years the company is bound to give him a chance to demonstrate his ability as a captain. If he fails this test he is assured of another chance to pass the test within six months and if desired he can have the next check with a different check pilot.

Pilots flying in Trans Canada's overseas operations have a higher rate of pay, different maximum flight hour provisions and have an established over-time rate. Thus, these pilots have a normal maximum of 900 hours per year flying time plus an allowable 120 hours per year overtime. Monthly maximum time is 75 hours plus 10 hours overtime. Actually TCA attempts to keep quarterly flying time below 255 hours and there is no cushion permitting the pilot to exceed the basic time limitation as used in the domestic operation.

In overseas operation the Captain's wage scale looks like this:

First Year	Monthly Salary	Hourly Overtime Rate
1st Six Months	$830	$11.05
2nd Six Months	880	11.75
Second Year		
3rd Six Months	880	11.75
4th Six Months	980	13.05
Third Year		
5th Six Months	980	13.05
6th Six Months and thereafter	1080	14.40

First officers or co-pilots also get fixed salaries plus fixed hourly overtime rates on the TCA international operation:

	Monthly Salary	Hourly Overtime Rate
1st Year	$320	$4.25
2nd Year	380	5.05
3rd Year	440	5.85
4th Year	500	6.65
5th Year	555	7.40
6th Year	575	7.65
8th Year and thereafter	615	8.20

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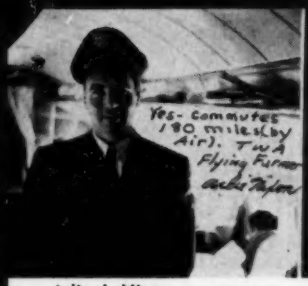

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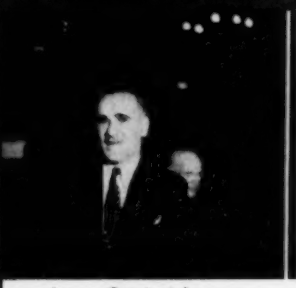

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Wright Aero Corp.
at Swiss Chalet
October 9, 1947

William Smith
Wright Aero Corp.
at Swiss Chalet
October 9, 1947

Fred D. Mason
Wright Aero Corp.
at Swiss Chalet
October 9, 1947

Edwin Prange
Wright Aero Corp.
at Swiss Chalet
October 9, 1947

Due South: Singapore is 1620 statute miles due south of **Hong Kong** by direct flight but because of take-off restrictions at Hong Kong, our BOAC Argonaut was to make a technical stop for refueling at **Saigon**, capital of French Indo-China.

This was a good break for me because it's difficult for anybody in the writing business to get permission to get into Indo-China; at least this was true some months ago. Even though we'd be on the ground only an hour I thought I could get a glimpse of the area and some indications of war activity.

Back in the States before starting on the trip I had wondered what sort of fellow passengers I'd have in the Far East and what sort of service I'd get. I looked forward to sandwiches for meals and beaten-up airplanes.

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A-1 Service: But BOAC seems to keep up its high standard of service even in difficult areas. The Argonaut (a version of the Canadair 4M, a combination of DC-4 and DC-6 with Rolls Royce engines) was tastefully decorated inside with blue carpeting and blue upholstery and grey walls and ceiling. It was clean as a whistle. And while we were flying above the overcast somewhere over the troubled guerilla warfare part of northern Indo-China, we were being served a very fine meal of Swiss steak, hot mashed potatoes, hot vegetables and hot rolls. I mean hot, not warm. Even the plates were hot. There were martinis and sherry before

lunch. Service was never better in the Waldorf-Astoria.

The flight made a hit with my wife because she reported a complete set of Elizabeth Arden cosmetics and accessories such as liquid powder, eau de cologne, etc., in the ladies' lounge and she reported the lounge was kept clean. There are a lot of airlines that fly in faraway places who alibi that they can't provide A-1 cabin service because of the type of passengers carried and because of poor ground facilities.

Red Soil: Granted that there are some bad spots for loading up with in-flight food and supplies, it is possible to have A-1 service anywhere in the world for the simple reason that some airlines provide it. The entire front portion of the cabin of our Argonaut was filled with Orientals who looked as though they couldn't afford the price of steerage passage, much less know what soap was for, but this didn't deter BOAC from maintaining a first-class in-flight service.

Saigon was 950 miles from Hong Kong. We came down below cloud level several hundred miles north of the capital and could see the red soil and rugged terrain and isolated farms and winding roads. Some areas were heavily forested. As we neared Saigon the terrain leveled out and there were farms and then many rice fields and all the roads headed in the direction of the city. We circled over the city (of about 150,000 population) which spread out in three directions from the big Mekong river. I noted that most of the streets were unpaved. It looked like a typical tropical French colonial city, which is to say that it didn't look very inviting. No buildings were freshly painted—everything had a dull look against the red soil.

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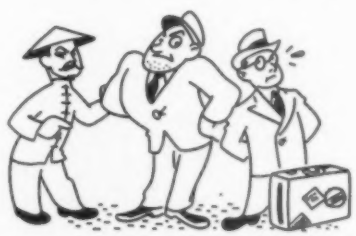
In Bond: We circled the airport north of the town several times and I counted about 60 airplanes parked off the flying area, about 15 of these being C-47's and the rest military including a batch of B-26's recently arrived from the U. S. Not a single four-engined airplane of any kind was in sight. Very little activity was in evidence except in a big depot compound under construction north of the field. The airport was large and in good condition.

A French girl in an Air France uniform conducted the passengers to the terminal and into an open-air bar and cafe where we were confined for an hour



during refueling. Tea, coffee, soft drinks (which looked pretty awful) and a poor bar selection were available. It was hot and humid. I wanted to walk around the terminal but this was prohibited. Transient passengers are considered criminals. There were a newsstand and souvenir stand in the main concourse but none of the passangers could get near them. The building itself seemed rather run-down. All we could do was sit and wait and look at some coolies doing some repair work on the ramp.

About the time we were ready to reboard the Argonaut a local French airline began loading up its C-47 for a trip to some point in the interior. The passengers were both French and natives and there was quite an assortment of strange clothing and hats. I wondered where they were going and how they lived in this unhappy, unstable and war-torn country. I was glad to be an American citizen, able to come in, look around, and leave. I would like to spend a few days in Saigon but I wouldn't want to live there.

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Delta of Life: Taking off for the south the vast delta of the Mekong River comes into view. It's an awe-inspiring sight with its many tributaries and branches and the seemingly endless rice fields. All along the mud banks, like flies congregating along icing oozing from a layer cake, are thousands upon thousands of small huts on stilts. The huge muddy river provides the means of existence for a great popula-

tion in this extensive rice bowl. It is the drinking water, the sewage facility, the means of communication and transportation, and the provider of rich upland soil to keep the rice fields rich.

Rivers are so important to life in the Far East and I know of no more complete a demonstration of this importance to total existence than a good aerial view of the vast Mekong delta. From birth to death there is the river, the home on stilts, and the rice fields. Nothing much has changed through the centuries.

✣ ✣ ✣

Baloots: And now it seems that I missed something important in the Philippines. I have a letter from Bill Zadra, the maintenance wizard of Philippine Air Lines, who says I should have written about the **balots** (pronounced baloots). What are they? A **balot** is a duck egg which is almost hatched. Just two days before the little duckling breaks through the shell it is hard boiled and sold by a vendor wandering about the Manila streets shouting "b-a-looooott." Brother, there's a delicacy—and you can have it! I'll wait until the duck grows up. And I'll take my eggs turned over lightly without any feathers or unborn chicks.

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We congratulate Continental Air Lines on its 17th anniversary

(*Continued from Opposite Page 3*)

CONGRESS

Separation Hearings: In testimony before Senate Interstate and Foreign Commerce Committee on separation of mail pay and subsidy, **J. T. Trippe,** president of Pan American World Airways, urged that U. S. pay its international airlines the Universal Postal Union rate of $2.86 per ton-mile for first-class air mail, the same rate paid foreign lines for carrying that class of mail. Additional subsidy payments required should be fixed by CAB and disbursed by Post Office Dept. from special appropriation, he said. Although international separation would have benefits, it might place U. S. lines at disadvantage of having their subsidies made public to the advantage of their competitors, he added.

Charles E. Beard, executive vice president of Braniff Airways, said that new mail rates should be established by CAB on an equal basis for all carriers to give effect to weight and length of haul, thereby avoiding a selection of carriers by Post Office on a ton-mile rate basis. This, in effect, was formula previously suggested by **J. H. Carmichael,** president of Capital Airlines. International service rate should not be established below UPU rate per ton-mile for first-class mail, he said. International subsidy figures should remain classified for use of executive departments and Congress, Beard added.

John B. Connally, general counsel for Trans-Texas Airways, endorsed Carmichael's plan and added that Congress should try to assign an arbitrary portion of subsidies paid to development of domestic commerce, and a percentage to contribution which airlines make to national defense. Congress should also require Post Office to designate flights for purpose of mail pay, he said, explaining that otherwise the PO might not use any local service flights.

No Cuts Restored: House passed fiscal 1952 appropriation bill without even an amendment being offered restoring cuts which House Appropriations Committee made in CAA and CAB funds. Some restitution may be made in the Senate.

MILITARY

USAF Goal: Defense Secretary **George C. Marshall** declares the Air Force is building toward an aircraft production capacity which will make possible a 180-wing force if it should ever be needed. He emphasizes that he's referring to capacity rather than production.

Stratojet Overhaul: Overhaul of Boeing B-47's will be handled at Tinker AF Base, Okla. Present modification work on Convair B-36's at Tinker will be shifted to Kelly AFB, Texas.

ConAC to Missouri: Headquarters of the Continental Air Command will be moved from Mitchel AFB, Long Island to Grandview, Mo., sometime after June, 1953.

PFO Move: USAF's Northeastern Air Procurement District, Boston, on Aug. 6 will move from Boston Army Base to downtown quarters at 14-17 Court Square.

People: **Frank C. Nash** has been nominated to be Assistant Secretary of Defense in charge of MDAP matters . . . **Francis P. Whitehair** has been nominated to be Undersecretary of the Navy . . . **Clarence L. Frederick** has been named chairman of the Armed Forces Regional Council for the Chicago area . . . **George E. Ramsey, Jr.,** has been named deputy comptroller of the Air Force, succeeding **Knox B. Phagan,** resigned.

CIVIL AERONAUTICS BOARD

Actions

Mid-West Airlines proposed transfer of control to Purdue University Research Foundation must await formal public hearings, CAB has ruled. Parties had jointly asked CAB to disclaim jurisdiction or to waive hearings and grant immediate approval. But Board indicated it has jurisdiction under air carrier acquisition provisions of the Act and ordered the matter consolidated with the Mid-West Certificate Renewal Proceeding scheduled for hearing Aug. 13. Research Foundation has entered a contract to buy Mid-West's Secured Convertible 6% Notes, Series A, for $64,000, to gain control of the local service line whose certificate expired June 24, but who may continue operations until Board decision in the renewal case.

American Airlines and Continental Air Lines granted final approval of agreements for Houston-west coast interchange service via El Paso.

Applications and Petitions

Chicago and Southern Air Lines applied for exemption to permit unrestricted operations between Houston and New Orleans, southern terminals on C&S' Route 8, and northern co-terminals on C&S' Caribbean route. Application for certificate amendment to accomplish same change has been pending Board action for several years.

Youth Argosy, authorized to operate 13 round-trip trans-Atlantic charters this summer, applied to CAB for permission to conduct another eastbound and two more westbound flights. Argosy said new flights would carry members to whom commitments had been made prior to Mar. 23, 1951, cut-off date set by CAB early this spring. In original trans-Atlantic policy statement, CAB had ruled out participation by Youth Argosy and similar organizations in the 1951 trans-Atlantic summer charter business.

Trans World Airlines made formal application for authority to suspend international operations at Chicago and Detroit from Nov. 1, 1951, to June 1, 1952, renewing a request approved last year to CAB for winter operations.

Colonial Airlines notified CAB that it has objections to recent mail rate orders of the Board which contemplate annual reductions in CAI's mail pay of approximately $654,000. Details are to be filed at a later date.

Eastern Air Lines and Chicago and Southern Air Lines have joined United Air Lines in opposing practice under which American Airlines allegedly issues blank ticket stocks to holders of air travel cards. Opposing lines have asked CAB to investigate.

Examiners Reports

Southwest-West Coast Merger will have no "substantial" effect upon possible substitution of Southwest for United Air Lines at various west coast cities, according to supplement report of Examiner Paul N. Pfeiffer. Southwest Renewal Case was re-opened to gauge effect of the proposed merger after Pfeiffer recommended five year extension for SWA and suspension of UAL's trunk-line service at several common points.

AIRLINES

NWA Asks Expansion: Northwest is asking CAB for six new route extensions in southeast Asia which would add 12,000 miles to its system. Routes are: (1) Toyko to Hong Kong (now served by NWA under charter arrangement with Hong Kong Airways), Bangkok, Colombo and Bombay, (2) Tokyo to Hong Kong, Bangkok, Singapore and Jakarta, (3) Manila to Bangkok, Colombo and Bombay, (4) Manila to Saigon, Bangkok, Singapore and Jakarta, (5) Manila to Bangkok, Calcutta and Bombay, and (6) Manila to Jesselton and Jakarta.

Canada to Investigate: Canada's Foreign Exchange Board has demanded the right to make an audit of foreign exchange transactions by Colonial Airlines, and held a hearing in Montreal recently. The exchange agency became active in investigating Colonial shortly after recent CAB charges against the airline.

Houston Interchange: American Airlines and Continental Air Lines started interchange service between Houston and West Coast cities on July 26 immediately after CAB approval was granted, despite a protest by Braniff Airways.

Argentina Reduces Rate: A decree issued by Argentina will mean a 63% reduction in rates paid to U. S. airlines for mail carried north from that country, U. S. Post Office officials say. Under the decree, Pan American, Panagra and Braniff will be paid in pesos at a revised conversion rate, reducing their revenue. PO has protested, and Argentina is considering the matter.

CCA Muroc Landings: California Central Airlines, which was to start service to Edwards AFB August 1, will pay 10% of each ticket to Muroc's post exchange, as well as a regular landing fee. CCA's fare between Burbank and Muroc is $5 plus tax and between Burbank and the Navy Ordnance Test Center at Inyokern $7 plus tax. Service was started with 28 seat Douglas DC-3's but Martin 202's will be used later.

FINANCIAL

Airlines

Northwest Airlines had a net of $47,593 for the first half of 1951, as against a net loss of $3,458,396 for the comparable period last year.

Braniff Airways reports a six months profit through June of $944,008, after taxes, compared with a net of $261,744 for the same period last year. Improved showing was made despite a sharp decline of $320,242 in the carrier's air mail income this year.

Continental Air Lines had a net of $210,240, or 68c a share, for the first half of 1951 as against a net of $1,456 or ½c a share for the same period last year.

Seaboard & Western Airlines grossed $5,317,000 for the first six months of 1951.

Manufacturers

North American Aviation, Inc. reported a net of $4,450,000, or $1.30 a share, on sales of $119,979,390 for the nine months ending June 30. During the same period last year, NAA netted $5,157,000, or $1.50 a share, on sales of $93,254,348.

Aeroquip Corp. had a net of $683,724, or 90c a share, on sales of $9,901,000 for nine months ending June 30. Like period last year showed a net of $442,825, or 59c a share, on sales of $4,839,000. Five cent dividend will be paid Aug. 15 to stockholders of record Aug. 1.

Fairchild Engine and Airplane Corp. will pay a 20c dividend Sept. 5 to stockholders of record Aug. 15.

CIVIL AVIATION

New CAR: Effective August 1, a new Civil Air Regulation states a student pilot must keep within a local flying area until he has 15 hours flight time, has taken three hours cross-country instruction and has had his student pilot certificate endorsed by a flight instructor.

People: **James W. Shipp** has been promoted to deputy regional director for CAA's Region Two and **W. Wright Holland** has been named executive assistant . . . **Warren S. Alberts,** of United Air Lines, is on a 90 day assignment as consultant to the director of the air transport division of the Civil Aviation Mobilization agency.

LABOR

WAL Mechanics Strike: Strike of 300 members of the Air Carrier Mechanics Association against Western Air Lines beginning July 27 closed down the carrier's flight operations as union-affiliated pilots and stewardesses refused to cross picket lines. The walkout, first in WAL's 25-year history, followed nearly five months of discussions. Spokesmen said the airline had made concessions on 15 separate union demands with the exception of a 'no farm out of work' clause, and a demand for a union shop with company check-off and collection of dues.

UAL-ALPA Talks Resume: Representatives of United Air Lines and the Air Line Pilots Association have resumed negotiations about a new contract. Talks were suspended during the ALPA-Behncke dispute. Company hopes talks will lead to quick agreement on operation of the Douglas DC-6B. UAL pilots want a mileage limitation while flying the plane.

WSB Enforcement Group: Wage Stabilization Board has set up an enforcement commission, headed by Miss **Helen Humphrey,** to check violation of wage rules. Although no aircraft firms are charged with overpaying wages, some subcontractors, especially in the tool and die industry, reportedly are. Commission expects to investigate 10% of all employers in the next year.

AA Hike Approved: A cost of living boost of $10.40 a month to American Airlines' Air Line Communications Employes Association workers has been okayed by WSB. AA communications workers will get the increase retroactive to Apr. 14 and have now received their maximum allowance for the year, $13.87.

Fringe Benefits Exempt: Fringe benefits, including paid vacations and holidays, may be granted by employers without being considered over the 10% legal increase in wages, WSB has ruled. Health, welfare and pension plans are not affected and will be considered in a future WSB regulation. WSB must approve all fringe benefits before they go into effect.

ACMA-PNA Contract: Air Carrier Mechanics Association, an ALPA affiliate, has signed with Pacific Northern Airlines a pact calling for 40 rather than 48 working hours with no loss in take home pay. It also calls for increased vacation benefits and a $125 a month cost of living increment for Alaska. PNA and Alaska Airlines have also signed wage agreements with the Air Line Stewards and Stewardesses Association, another ALPA group.

Tulsa Representation: Both the United Auto Workers-CIO and the International Association of Machinists-AFL have started intense drives to represent Douglas Aircraft Co. workers at Tulsa. UAW sent an assistant director of their aircraft department from New York to aid organizers. IAM claims "excellent progress."

AROUND THE WORLD

Greek Airline Merger: Hellenic Airlines, S. A. and Greek Airlines (TAE) Technical and Aeronautical Exploitations have been merged into a new national carrier. Col **F. A. Zotos,** founder and managing director of TAE, heads the new line.

RAF's New Fighter: Hawker Aircraft will start immediate mass production of its new P-1067 Superjet for the Royal Air Force. Powered by a Rolls-Royce Avon engine, the plane is claimed to be "the best fighting aircraft" in the world.

Brabazon Flight: Bristol Brabazon I, prototype transport designed to carry 100 passengers across the Atlantic, has made its first passenger flight, carrying 26.

PAC Deliveries: Aerovias Reforma of Mexico has received 35 R-1830-92 engines from Pacific Airmotive Corp.'s export division for its Douglas DC-3's. PAC has also shipped 14 R-985's to Central African Airways for its Beech D-18S's.

Beaver Production: de Havilland Aircraft Co. of Canada is stepping up production of its Beaver to seven a month. A larger version, the King Beaver, will fly before the end of the year.

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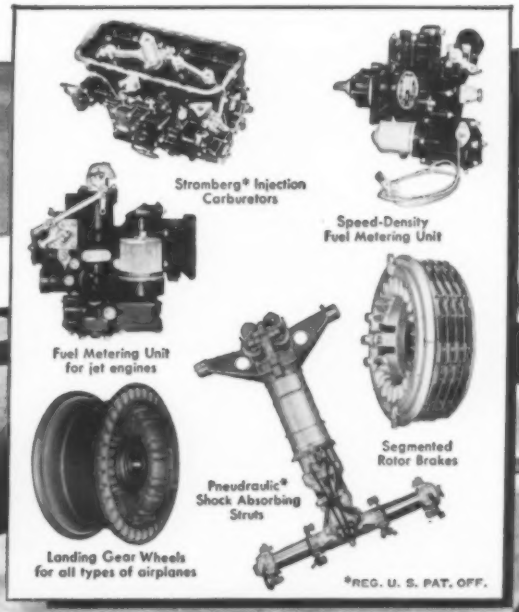
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NEWS ISSUE

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SERIAL RECORD

a LOOK at the WEEK

Pentagon and Aircraft Production Board officials are seriously thinking of slowing down the build-up schedules for Navy and USAF. Deliveries of machine tools, engines, electronic equipment and forgings have been so slow that present schedules are not being maintained. Lead time on machine tools now averages 22 months.

•

The periodic row between the armed services over use of tactical versus strategic airpower is ready to break out again. There was a lessening of tension some months ago when the Air Force indicated it would devote more attention to ground support but some observers feel the USAF is re-emphasizing strategic bombing.

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Many airlines are expecting a rash of labor trouble. Main issue will be demands for overtime for night, Saturday and Sunday work.

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Transport builders are worried about shortage of Pratt & Whitney R-2800 engines and P & W's announcement curtailing acceptance of future orders. Convair, Douglas and Martin are reported on the hunt for early R-2800's which can be converted to the CB-16 configuration.

•

Price of electronic equipment and aircraft engines may go up again soon as result of higher prices permitted for tool steels and other metals containing tungsten.

•

Fringe benefits are getting costly. North American Aviation's board chairman, J. H. Kindelberger, told a House Appropriations Committee that in 1951 NAA will pay its 28,000 employes for more than seven weeks not worked. All that extra pay is the result of fringe benefits.

•

More customers are using air freight every day. Slick Airways, which once had a small group of regular customers accounting for most of its business, made a survey which shows its biggest customer (General Motors) represents 7% and the next biggest 3%, of its total business.

•

Naval aviation will not be neglected because a battleship admiral has become Chief of Naval Operations. Navy Secretary Kimball says Adm. Fechteler knows the carrier is the backbone of the fleet. Besides, Fechteler's deputy, Vice Adm. Donald B. Duncan, has been in aviation since 1920.

New Steps to Bolster Production

Aircraft Production Board chairman Harold R. Boyer, on the job less than a week, took steps to bolster the lagging airplane production program.

Meeting with machine tool builders and engine manufacturers, Boyer was told prices stand in the way of increased output of machine tools. He was instrumental in getting tool builders super-priorities and is also expected to push for higher prices and easier financing for expansion.

Noting that engine output is the main factor holding up production of complete aircraft, Boyer has decided to re-schedule production of airframes so that engines and fuselages are produced concurrently. As engine production goes up, Boyer will order more airframes built. Boyer also:

Named Allen C. Rankin, who formerly worked with him on the World War II War Production Board and who later served in the State Department's Aircraft Division, as his special assistant.

Made plans to bring together several government agencies concerned with plane production. One of his first moves is taking the NPA Aircraft Division out of the Textile, Leather and Specialty Equipment Bureau.

Civil Plane Allotments Made

National Production Authority's Aircraft Division, which has received its fourth quarter allotments of steel, copper and aluminum from the Defense Production Administration, says it has set aside enough to guarantee production of lightplanes at the rate of 3,500 a year, recently recommended by the Air Coordinating Committee. This is how the allotments will be made.

Transports: 697 tons of carbon steel, 1,381 tons of alloy, 122,805 pounds of stainless, 215,634 pounds of copper and 4,831,635 pounds of aluminum.

Lightplanes and Spares: 156 tons of carbon steel, 369 tons of alloy, 21,753 pounds of stainless, 52,739 pounds of copper and 1,123,670 pounds of aluminum.

Reserves and Certain Military Items: Remainder of the Division's total allocation of 15,639 tons of steel, 1,148,000 pounds of copper and 7,950,000 pounds of aluminum.

North Atlantic Rate Crisis

By negative action on new North Atlantic rate resolutions of the International Air Transport Association, CAB made possible an "open rate" situation after September 30. New resolutions which were tied in with a deferred tourist program were scheduled to take effect October 1. But when CAB, though a trans-Atlantic coach advocate, rejected IATA's coach proposal, all rate resolutions fell automatically.

Immediately, CAB Chairman Donald W. Nyrop urged U. S. trans-Atlantic lines to push for an emergency meeting to avoid the "open rate" situation on October 1, and to consider an earlier and more flexible tourist service than the October, 1952, program just rejected.

IATA then requested a mail vote on all resolutions, other than tourist, to prevent the "open rate" crisis. It also suggested an emergency meeting in September to formulate a new trans-Atlantic tourist plan, presumably along lines which will be acceptable to CAB. This could mean start of coach flights by spring, 1952.

MANUFACTURERS

Allison Radar Suit: Allison Radar Corp. has filed a Federal District Court suit against inventor Donald K. Allison to force him to turn over an airborne radar set so that it can demonstrate the set to prospective customers. The firm says it bought the set from Swedish airline ABA. The firm was originally set up to market the inventor's products but later became a manufacturer as well.

Merit Pay Hikes: Wage Stabilization Board has laid down new rules governing merit and length of service increases by employers. They are authorized provided they don't exceed highest hike made before January 25. No approval is needed from WSB if hikes meet certain conditions.

Walnut Ridge Leased: United Nations Engineering and Export Corp., Washington, has leased the former Walnut Ridge AF Base in Arkansas and will seek military aircraft overhaul work there. The field has a 150,000 square foot hangar and a machine shop building.

Chase Plant: Chase Aircraft Co., which is now using its West Trenton, N. J., plant for tooling for its C-123, will have to turn it back to the Navy on October 1. Operations will be transferred to Willow Run. Navy will make the plant an electronics laboratory in conjunction with its Naval Gas Turbine Lab there.

Carrier Order: Carrier Corp. has received a subcontract from the General Electric Co. for large scale production of axial compressors and other components for GE's J-47 jet engine.

Casting Plant: Gerity-Michigan Corp., Adrian, Mich., expects to be in production November 1 on rough magnesium castings for aircraft engines. Gerity-Michigan is building the plant, which will be equipped by USAF.

McCulloch Purchase: McCulloch Motors Corp. has bought out the stock of Rhodes Lewis Co., Culver City, Calif., maker of ordnance and aircraft components. Rhodes Lewis contracts, totalling more than $6,000,000, will be fulfilled by the new ownership.

Manpower: In a major manpower statement, Mobilizer Wilson has ordered wage hikes and draft deferments for skilled machinists, where possible. He also asked for a larger trainee program and told defense agencies to study manpower supplies before placing contracts or setting up war plants in any area.

CMP Carryovers: NPA says manufacturers who ordered controlled materials for delivery in the second quarter but failed to get them until the third because of unavoidable delays will not have them counted as part of their third quarter allotments. But materials ordered in the second quarter for delivery in the third must be deducted from allocations.

Machine Tool Priorities: NPA has granted machine tool builders first call on machine tools so that they can produce even more. Under the present system, tool builders are treated equally with other firms having tool priorities.

McDonnell Plant Purchase: CAA and St. Louis board of aldermen now must pass on an agreement reached between McDonnell Aircraft Corp. and St. Louis Airport Commission for the purchase of its plant for $9,873,093. Contract also gives McDonnell option of acquiring additional land.

GCA Orders: Gilfillan Brothers, Inc. will receive at least $9,600,000 in Navy orders for Ground Control Approach units this year. The order will be for 24 units at $400,000 each.

IMPA Organized: GSA Administrator Jess Larson will become the head of the new Defense Materials Procurement Agency, which will handle all buying of strategic materials. Munitions Board will still decide what's needed and will tell General Services Administration, which will go to DMPA for the materials.

People: **Charles W. France,** former vice president with Curtiss-Wright Corp. and Eastern Air Lines, appointed to similar post with Aeronca Manufacturing Corp. . . . **Igor Sikorsky** awarded Daniel Guggenheim Medal for 1951.

PLANES & EQUIPMENT

Interchangeable Seats: Navy has ordered interchangeable folding passengers seats stressed for 16 G's for its Douglas R6D-1 (DC-6A) and Lockheed R70-1 (Super Constellation) aircraft. When Convair's R3Y-1 transport flying boats are ready, they, too, will have the interchangeable seats.

RCAF T-36's: Canadair, Ltd., which will build the Beech T-36 trainer for the USAF, will also produce plane for Royal Canadian Air Force. Some 8,000 workers will be hired by end of 1952, bringing total work force to 14,000.

Coast Guard's Transports: The two Martin 404 transports ordered by Coast Guard have been designated RM-1's.

Fight for J-57's: Both the Boeing B-52 and the Convair YB-60 eight-jet bombers are supposed to fly this year using Pratt & Whitney J-57 engines, but enough of them will not be produced to equip both planes. B-52, now scheduled for production, will probably get priority on the engines.

King Beaver: A 14-passenger version of de Havilland DHC 2 Beaver, designated the King Beaver, is scheduled for first flight in September. The DHC 3 will be powered by a Pratt & Whitney R-1340 engine, will gross 7,200 pounds and is generally bigger than the Beaver. Several versions of the King Beaver, including ski and pontoon undercarriages, are contemplated.

Improved Hiller Helicopter: Flight tests are nearing on Hiller's new version of its military helicopter. The model uses a 200 hp engine, has a higher gross weight, improved throttle and cyclic control system and general increased performance. Army version will have a skid landing gear while Navy will use a quadricycle gear.

American Aviation

News Issue (ABC) **Vol. 15, No. 11**

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American Aviation is published every Monday by American Aviation Publications, Inc., Washington, D. C. Printed at the Telegraph Press, Harrisburg, Pa. Subscription rates for United States, Canada, Mexico, Central and South American countries—$5.00 for 1 year; $8.00 for 2 years; $10.00 for 3 years. All other countries—$7.00 for 1 year; $12.00 for 2 years. Entered as Second-Class matter in Washington, D. C., and Harrisburg, Pa.

Editorial and business offices: 1025 Vermont Avenue, N. W., Washington 5, D. C. Telephone—STerling 5400.

American Aviation incorporates Airports and Air Carriers, Airports, Aviation Equipment, The American Pilot, Aviation Sales and Service, U. S. Aviation, and American Airports. All rights to these names are reserved.

Air Lift Planes: Airlines have been told that MATS will continue to need 60 of their transports, 30 from the scheduled carriers, the rest from irregulars. Several airlines are expected to get some of their planes back to help with summer business.

Beaching Gear: Edo Corp. has developed a seaplane beaching gear for handling large flying boats. Designated Model 144, the gear can submerge itself, move forward, back or sideways or crawl onto a beach on its own power driven tread, lifting seaplanes up to 300,000 pounds. It is propelled by two engines driving two propellers at diagonally opposite ends of the floats.

Trainer Tests: USAF cadet pilots were to start evaluation tests August 10 on both the Beach T-34 and Temco T-35 at Goodfellow AFB, Texas. The tests will last 135 hours and will take 5½ months.

C-45 Remanufacture: Beech Aircraft Corp. will remanufacture 933 of its C-45's at a cost of $31,011,181 for USAF use as trainers, administrative or light cargo aircraft.

Turboprop DC-6: Douglas Aircraft Co. has named J. J. Dysart, former Pan American World Airways maintenance manager, as project engineer of its propcsed turboprop powered DC-6.

F-86E Refueled: A North American F-86E has been successfully refueled by a Boeing KB-29P tanker at Edwards AF Base.

AIRLINES

CAB Probe: W. R. Grace & Co. and National Airlines have asked CAB to dismiss its probe of possible control of National by Grace because Grace has sold its 174,000 shares of National stock. Grace, which bought the stock at $5 a share, sold it for $14.375 a share.

Ticket Machine: Capital Airlines is testing an automatic ticket machine at Washington Municipal Airport. It provides one way or round trip tickets to any of five cities and the agent fills in only the flight number and departure time. If successful, Capital plans to use it at its major stations.

Buffalo Landing Fees: Increased landing and rental fees are now being paid by American and Capital Airlines at Buffalo Municipal Airport. Despite their protests, they will pay them for a year at least, pending a survey of the airport on which longer term rates may be based.

ACI Express Plan: Air Cargo, Inc. is working on plan to operate an air express set-up in case the airlines decide to stop using Railway Express Agency. Airlines and CAB are reported dissatisfied with recent REA increased charges, which give the airlines no added revenue.

CONGRESS

Higher Mail Rates: If the Senate Committee on Post Office and Civil Service is successful in establishing the need for an eight cent air mail postage rate, Air Transport Association believes air mail volume will be reduced on the average of 8,750,000 pounds a year over the next two years.

Aviation Actions: Other than regular appropriation bills the only important aviation legislation likely to be handled this session is subsidy separation. Senate Interstate and Foreign Commerce Committee has finished its hearings, and a new bill based on the hearings is to be presented.

New Bill: Sen. Edwin C. Johnson (D., Colo.) has introduced S.1889, which provides that one form of transportation may own and operate another form of transportation. Bill has been referred to the Senate Interstate and Foreign Commerce Committee.

Avgas Tax Hike: Airlines are opposing a new revenue bill now before the Senate Finance Committee which provides, among other things, a possible increase on gasoline. As the bill passed the House, an increase of ½ cent a gallon was authorized.

CIVIL AVIATION

Lightplane Shipments Down: Only 208 lightplanes valued at $1,541,000 were shipped in June, a drop of 143 planes and $446,000 from the same month of 1950. The June, 1951 figure is also lower than shipments during 10 months of 1950.

ATAC Set Up: Federal Civil Defense Administration has created an Air Transportation Advisory Committee made up of industry and government representatives.

Air Mobilization Plan: CAA's Office of Aviation Information is making available a suggested uniform State Plan for Civil Aviation Mobilization and Civil Defense. The plan was recently approved by the Federal Civil Defense Administration.

CIVIL AERONAUTICS BOARD

Actions

• **Pan American-Grace Airways** turned down on petition for stay of Miami exemption award to Braniff Airways. Action was without prejudice to Panagra's request for reconsideration which remains to be ruled on.

• **Wisconsin Central Airlines** directed to show cause why monthly mail pay should not be increased from $75,000 to $90,000 for nine-month period ending March 31, 1952. In response to WIS' request, Board proposal is to offset increased costs connected with conversion from single-engined to twin-engined aircraft. On April 1, 1952, rates will drop back to approximate level of today's rates.

Applications and Petitions

• **Air France** requested CAB permission to activate remaining three of five routes authorized a French carrier under the U. S.-France Air Transport Agreement. Routes are: (1) France via intermediates over the North Atlantic to New York and Houston and beyond to Mexico, in both directions; (2) Martinique via Guadeloupe to New York, in both directions; and (3) Martinique via Guadeloupe and via intermediates to Puerto Rico and beyond via Dominican Republic and Haiti to Miami, in both directions.

• **Branff Airways, Eastern Air Lines** and **Trans World Airlines** submitted voluntary interchange proposal to CAB for through service between Miami, Houston, Amarillo and west coast. Proposal is similar to that which CAB recently announced it would consider in the reopened Southern Service to West Case scheduled for oral argument on September 17.

• **Southern Airways** asked for an exemption to serve Gulfport and Biloxi, Miss., as alternate intermediates to Hattiesburg, Miss., on Route 98, to provide for "emergency needs" of Keesler Air Force Base.

• **U. S. Airlines**, certificated all-cargo line, urged dismissal of complaint in which Riddle Aviation Company, among other things, offered to buy out U. S. at a figure to be determined by CAB. Complaint, U. S. attorney Albert F. Beitel said, fails to allege any ground for Board action.

• **Central Airlines** applied for immediate exemption to operate between Wichita, Manhattan and Topeka, Kansas, to fill an emergency need for air transportation created by recent floods. Carrier estimated service would be required for six months.

• **Continental Air Lines** applied to CAB and Commanding General of Fort Riley, Kansas, for exemption to provide emergency air service to flood-stricken Manhattan-Fort

Riley-Junction City, Kansas, area. Continental urged that it be permitted to use Marshall Field during the emergency.

CAB Calendar

Aug. 13—Hearing in Mid-West Airlines Certificate Renewal Case. Washington. Docket 4052 et al.

Aug. 13—Hearing in Airline Transport Carriers, Inc., and California Central Airlines Enforcement Proceeding—Interlocking Relationship. Washington. Docket 4109.

Aug. 20—Hearing in New England Air Express Individual Exemption Case. Washington. Docket 3842.

Aug. 22—Hearing in Robin Airlines Individual Exemption Case. Washington. Docket 3941.

Aug. 27—Hearing in CAB investigation of Consolidated Flower Shipments, Inc.—Bay Area. Washington. Docket 4902.

Aug. 29—Hearing in Caribbean American Lines Individual Exemption Case. Washington. Docket 3901.

MILITARY

Pittsburgh Clinic: Another sub-contracting clinic will be held by Defense Department at William Penn Hotel, Pittsburgh, on August 15-17.

Appropriations Cuts: House Appropriations Committee, in reporting out the 1952 defense appropriations bills, cut $671,491,000 from Navy and USAF aviation funds, including a $501,200,000 drop in procurement money for Air Force. Some $500,000,000 for aircraft hardware (which will be restored when bottlenecks on a few projects are cleared away) and $1,200,000 for administrative personnel were slashed out. Senate may oppose the half-billion eliminated from procurement.

Palm Beach Repossession: USAF will take over Palm Beach International Airport, Fla., as a base for its 95-wing program. It was owned by AAF as Morrison Field during the war but was deeded to Palm Beach with a recapture clause three years ago.

Maintenance Training: Embry-Riddle Co., Inc., Miami, Fla., a division of the Embry-Riddle School of International Aviation, will train 77 USAF personnel in aircraft maintenance for 15 weeks. Contract value is $38,000.

Radio Familiarization: Collins Radio Co. has received an $80,000 contract to familiarize 291 AF personnel with its radio equipment at Collins plant.

Rescue Competition: USAF will soon decide on orders for 40-100 rescue-evacuation planes, with contracts probably going for Douglas YC-47F and Chase XC-123. Eglin AFB experts recommended that Douglas get the order, but Chase may come in for part of it.

Permanent Clinics: Midcentral Air Procurement District will soon activate six permanent AF defense clinics, where small businessmen can find out about needed equipment. Clinics will be located at Chicago, Milwaukee, St. Louis, Minneapolis, Indianapolis and South Bend.

Everett Hangar: Alaska Airlines DC-4 hangar at Snohomish County Airport, Everett, Wash., will be taken over by USAF on September 15 as a military jet maintenance hangar. Alaska Airlines will continue to use the field, as will Willard Flying Service. USAF is establishing an interceptor base there.

People: **Richard Hodgson** appointed consultant to USAF Chief of Staff for research and development . . . **Lt. Col. William R. Graham** chosen acting deputy commanding officer of Southern Air Procurement District at Fort Worth . . . **Dr. Lawrence W. Bass** named chairman of Research and Development Board's Committee on Equipment and Materials . . . **Edward T. Dickinson** appointed deputy AF Secretary for installations . . . **Harry K. (Tony) Clark** named USAF's deputy for production.

LABOR

Cost of Living Hikes: Wage Stabilization Board has ruled that wages may be increased as the cost of living goes up. Boosts over the legal 10% ceiling will have to be approved but approval will be automatic.

DC-6B Issue: United Air Lines pilots have started flying the Douglas DC-6B's to strengthen bargaining position on the overall contract. UAL has re-established the 9,300 miles of schedules it had stopped when the pilots refused to fly the B's.

Escalator Clause: Regulation permitting cost of living payments to workers having such agreements in their contracts before January 25, even if they go over the 10% ceiling, has been extended by the Wage Stabilization Board.

WAL Strike: Western Air Lines laid off more than 450 office and airport personnel as a result of the strike of 300 of its mechanics. Other sales and service personnel will also be affected. WAL mechanics, members of the AFL Air Carrier Mechanics Association, dropped their demands for a union shop and sought arbitration but the airline turned this down. Issues at stake involve dues checkoff, wages and fringe benefits.

ALPA Developments: Pending court decision on their legal entanglements, Air Line Pilots Association checks will be signed by former president David L. Behncke, president Clarence N. Sayen, secretary Francis A. Spencer and treasurer R. G. Strait. Behncke, meanwhile, has filed a $2,200,000 suit against eight ALPA directors for being illegally voted out of office. Federal Judge John P. Barnes has refused to hear arguments on both sides, referring the case to Master in Chancery Victor LaRue.

AROUND THE WORLD

Argentine Mail Rates: Argentina has decided to pay U. S. airlines for northbound air mail in pesos rather than in gold francs, and U. S. Post Office says the loss in converting the money will amount to 63%. PO has protested and Argentina has promised to give case prompt attention.

German Airline: Several plans are under way to create a new airline in West Germany as soon as country is back on its feet. It might be authorized under the direction of the occupying powers or it might even be operated by a non-German concern. No concrete proposal has yet been offered for approval, however.

Point 4 for Pakistan: Pakistan has asked for Point Four aid to fight a swarm of locusts. Aviation International Delivery Service has won the bid on a project to supply planes and pilots for spraying. Work, which will last three months, was to start August 10.

Canadian Tunnel: Canada's National Research Council will soon receive an advanced supersonic wind tunnel, which has a 10-inch-square test section and features an interchangeable nozzle box design. Nine different nozzle boxes will provide speeds from Mach 1.4 to 5,000 miles an hour at sea level.

COMING UP

Aug. 13-15—Society of Automotive Engineers West Coast meeting, Olympic Hotel, Seattle, Wash.

Aug. 15-19—99's 5th annual All Woman Transcontinental Air Race, Santa Ana, Calif., to Detroit.

Aug. 17—NAA annual meeting, Detroit.

Aug. 18-19—National Air Races, Detroit, Mich.

Aug. 22-26—99's Int'l convention, Macinac Island, Mich.

Aug. 24-26—Air Force Assn. annual convention, Los Angeles.

Aug. 25—Air Transport Command reunion, Ambassador Hotel, Los Angeles.